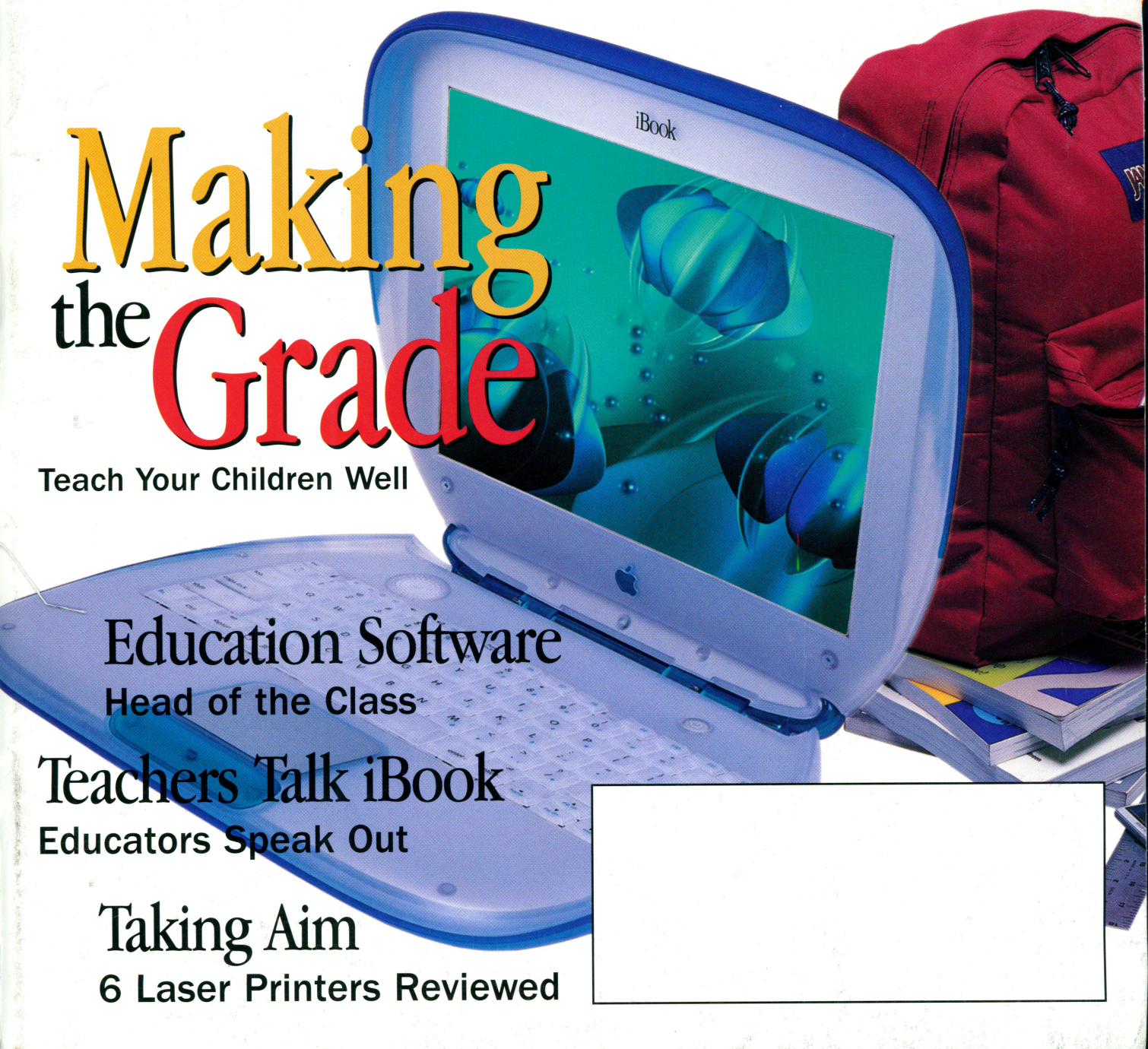
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MacHome

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Teach Your Children Well

Education Software

Head of the Class

Teachers Talk iBook

Educators Speak Out

Taking Aim

6 Laser Printers Reviewed


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BRICKS, MORTAR, AND MIDDLEMEN.

What's a Virtual Printer Store? It's everything a store isn't – the most direct, convenient, and affordable way to get the printer you need. Here's why:

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Finally, you end up with a printer good enough to sell itself – because it has to. One that turns out vivid halftones, poster-sized graphics, printshop-quality text, and performs other various noteworthy feats noted below.

The Virtual Printer Store. Contrary to popular belief, there is something more important than location, location, location. Namely, no location at all.



ELITE 12/600 USB

12 pages per minute
600 x 600 dpi resolution
Maximum Print Area 8.5" x 14"
Letter, legal, envelope
250-sheet Universal Tray
PostScript® Level 2 compatible, PCL 5
35 PostScript fonts, 15 PCL fonts,
45 downloadable fonts
RAM expandable to 64 MB
1st year Platinum Exchange
USB (cable included),
Bi-directional Parallel

2nd Paper Feeder[1]
(includes 500-sheet Universal Tray) Add $299

2nd year Platinum Exchange[3] Add $ 89

$699

USB UNIVERSAL SERIAL BUS



ELITE XL 20 Series

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600 x 600 dpi resolution
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35 PostScript fonts, 15 PCL fonts,
250 downloadable fonts
RAM expandable to 64 MB
1st year Platinum Exchange
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Ethernet (10 BaseT, AAUI),
Bi-directional Parallel

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2nd year Platinum Exchange[3] Add $179

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Lease $56 Month/36 months[4]

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ELITE 12 N Series

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Letter, legal, envelope
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35 PostScript fonts, 15 PCL fonts,
45 downloadable fonts
RAM expandable to 64 MB
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EtherTalk, TCP/IP
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Bi-directional Parallel

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45 downloadable fonts
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Ethernet (10 BaseT, 10 Base2),
Parallel

2nd year Platinum Exchange[3] Add $ 139

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Mac[5] Yes[6] Designed for Microsoft® Windows NT® [7]

GCC Technologies is a registered trademark; The Virtual Printer Store is a trademark of GCC Technologies, Inc. All other trademarks or registered trademarks are trademarks of their respective companies. [1]Supports one additional paper feeder. [2] Supports two additional paper feeders. [3]Platinum Exchange pricing is at point of purchase only. [4]Leasing provided by independent leasing companies to qualified customers. Lease payments based on 24-month and 36-month terms. Lease terms subject to change without notice or obligation. [5]All GCC printers are Mac OS compatible. [6]NetWare is supported on all 20 Series printers. [7] Windows certification is for the 20 Series printers only.

Keycode 909MHD

october 1999

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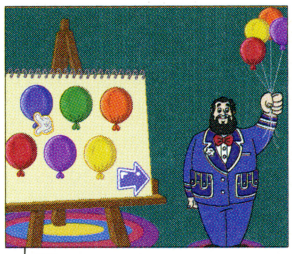
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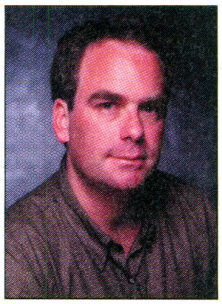
Our Rating System

5	**Mac-nificent.** You gotta get it. No flaws.
4	**Excellent.** Recommended even if it has a minor flaw or two.
3	**Average.** Despite problems, still a worthwhile product.
2	**Below Average.** Has serious flaws that limit its usefulness or fun.
1	**Poor.** Avoid this product at all costs.

iMac/G3 Compatible USB

Indicates iMac/G3 compatibility

from the chief [Editorial]



Surrounded by Geniuses

Geniuses are around me most of the time. On the bus, they regale their friends with snappy witticisms. On the streets of the financial district, they talk urgently into cell phones, making big deals. In fashionable cafes, they read Dostoyevski, write scripts, make sketches. They have all their notebooks, sketchpads, and dog-eared paperbacks laid out in front of them *just so*.

My friends, coworkers, acquaintances, and well-wishers? Geniuses all. Like the Five Chinese Brothers, my inner circle seems capable of anything, be it fixing cars, programming computers, writing books, cooking seafood, starting cleverly named Internet companies, putting together a magazine, or running marathons.

But normally I'm only with one, maybe two geniuses at a time. So, as a sub-genius, I feel like I have a fighting chance, should any technical or intellectual discussions come up. But the other day, a funny thing happened ...

I found myself at Apple's storied headquarters in Cupertino, California, along with *MacHome's* intrepid reviews editor David Weiss, himself hovering at the near-genius level. We looked up an old friend who works there (yes, a genius).

Our friend invited us to join him at the fortnightly Apple Beer Bash, where snacks and libations flow freely in the company cafeteria. Never ones to turn down free sustenance, we agreed. And when I got to the cafeteria, I was awed by the sheer number of geniuses who were around me on every side. You literally could not swing a cat without hitting one.

They wore I.D. badges, and since I am an avid reader of About boxes, I recognized some of the names. "Hey! That guy worked on OS 8.5!" I thought to myself. "That one's on the QuickTime 3D team, and that one's in PowerBook engineering!"

It was intimidating. All around me were the folks who create the Mac — *scores* of them. I began breathing heavily and hallucinating slightly, though I tried to be nonchalant and make innocuous comments about the ice cream with the sprinkles. I daren't talk business, as I was an intruder of sorts. I thought about *Serpico* explaining why he'd wanted to be a cop, because the cops knew what was going on behind those police barricades. And the people around me at this gathering, they *knew*.

I wanted to ask them many questions about upcoming products, but I know they can't talk to the press about that stuff till it's official. But as it stands, Apple has just four main products, compared to dozens just two years ago. And though some lament that there aren't enough options in each model, many of us feel confident that in time, Apple will diversify its basic offerings to address such concerns.

Strolling through the Apple cafeteria that warm day, trying to find the soda machine, I took some solace in the knowledge that these folks around me have a plan to bring Apple back where it belongs. For a few brief moments, I was a child snug in the seatbelt of my parent's car, thinking, I'll get where we're going — they'll take me there. These are geniuses, after all.



John Poultney, *Editor*

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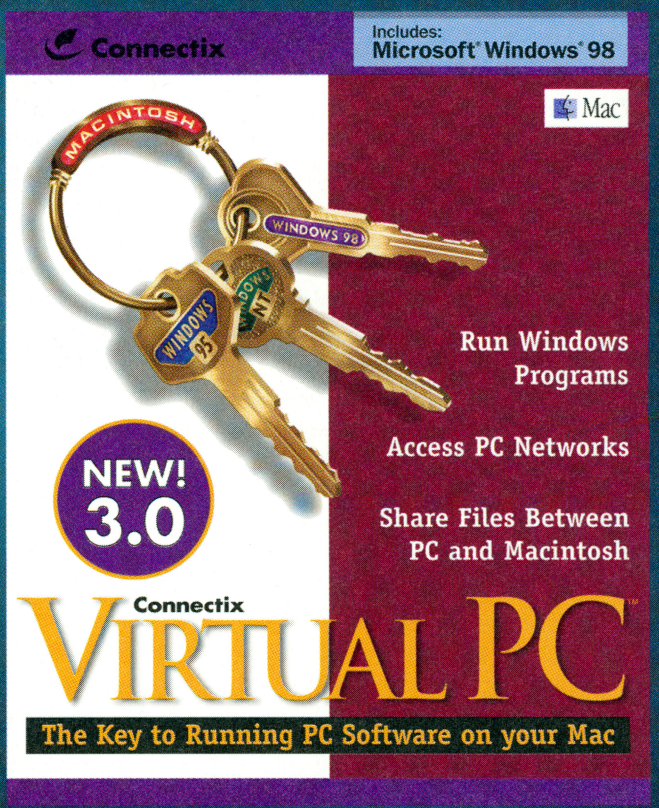
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Write On [Your Letters]



I Wish We Had That

I agree with John M. Zimmerman's letter in the September issue of *MacHome* in which he stated that Apple should continue free technical support even after 90 days. I would go further and say that all equipment and program manufacturers should provide free technical support, and not just for 90 days. Many problems are not found immediately. Costs could be included in up-front purchase prices. I don't think that many people will abuse the privilege. There should be a mechanism for those that do abuse the system.

Tom Kashiwabara

✍ *We also think such a policy would be great, but alas, the cost may be prohibitive. Apple, of course, is back where they are financially in large part because they cut a lot of costs a few years back, and one of those was free tech support. Tech support costs a lot — that's why a lot of companies charge for it now.*

Apple has some protection plans, such as AppleCare (see www.apple.com/support*), that you can purchase, and as we reported before, a recent settlement in a class-action suit provides free lifetime tech support for owners of certain products that originally included free tech support. As long as you're the original owner, that is. (See* www.apple.com/legal/techsupportsettlement.html.*)*

The thing is, Apple's Website, at the aforementioned support area, has lots of answers to Mac problems. You'll be pleasantly surprised at what you can find. The site has sections about the iMac, system software, the iBook, and other Apple products; it's all arranged so you can easily select topics from pull-down menus.

And there's also the Technical Information Library (TIL), which has more technical information than the standard support area. It's updated daily and has more than 14,000 searchable areas. Find it at http://til.info.apple.com.

That's the Spirit, Son

Hello, My name is Ivan Velez and I'm from Bound Brook, New Jersey. I wanted to know if you could tell me, how do I go about becoming a computer programmer on Apple computers only? What technical or college program do you recommend? I've called a few schools here in NJ, and all they teach is on PCs only. Why is that? How come I can't find a school that teaches on Apple computers? I love Apple! It is so much easier to use and also so much easier to understand.

Ivan Velez

✍ *Ivan, Ivan, Ivan. The world is filled with injustices such as those you've mentioned. And we're doing all we can to correct these. Unfortunately, as you've seen, a lot of schools assume everyone who wants to program will want to do it on PCs, even though lots of schools use Macs. Go figure.*

Truth be known, developing for the Mac has always been a nonmainstream proposition, though it's obviously becoming more mainstream now. It can still be difficult to find information on the topic, however.

But fear not! Because Apple started an official Student Developer program back in 1998. You'll find all the details at http://developer.apple.com/programs/students.

I Can See Clearly Now

In your September article describing the benefits of the PC MagnaViewer (a $295 contraption that sits a foot in front of your monitor and magnifies the screen) you forgot to remind Mac users about a free and easy-to-use utility that comes with the Mac OS 8.6: CloseView. This little add-on lets users magnify screen contents up to 16 times for easier viewing by users who are visually impaired or who may have a smaller monitor. It can also be downloaded from Apple at *www.apple.com/education/k12/disability/universal.html.*

Trust me, as provider of accommodation to students with disabilities at a major U.S. university, sometimes the easiest and cheapest solutions are still the best!

Sean J. O'Briant

Domo Arigato, Mr. Ihnatko

Thank you for giving Andy Ihnatko back to me. I've missed him so much and I've wondered where he has been. He was nowhere to be found when I got my G3. I couldn't find him at SF Macworld when the new iMacs arrived. I'm happy that Andy is with *MacHome*, my favorite Mac publication.

Michelle Dotson

I am a current *MacHome* subscriber whose subscription just ran out. I was weighing the need (at least in my house) for *MacHome* in the pantheon of Mac-oriented journals, as much of the same information seems to be readily available on the Internet without looking too hard. But after hearing that Andy Ihnatko will be once again in print — sign me up! I have missed his columns and look forward to seeing them again.

Perry Davis

I have been a semi-regular newsstand buyer of *MacHome* for some time now. Noting, however, that you have added Andy Ihnatko to your mag as a back page author, you will now have one too many pages in your mag and I will no longer be buying same.

This guy has been foraging Mac publications' misplaced largesse for far too long. He has nothing useful to say and is

incapable of expressing even that in a readable manner. His inane ramblings could just as well be published in the *London Times*, as far as applicability to Mac interests is concerned.

Bill Monroe

✍ *Touché, Mr. Monroe, if that is your real name! Your words, they sting. But we like Andy. We find him insightful and humorous, and as you see, we've gotten letters from others that feel the same. Many have missed him since* MacUser *folded. As for him bilking Mac magazines' "misplaced largesse" for far too long, well, actually this is the first time he's been back in print for over two years in a Mac-specific magazine. And what's all this about the* London Times, *again?*

Hidden Fun

I recently found that there is a hidden feature of one sort or another in each release of the Mac OS. As you mentioned in your "Tips of the Titans" article in the September issue, hold down Control-Option-Command and select "About the OS Team," you get a show of the people who made the OS. I found in an early version of System 7 on my LC II that if you type "secret about box" in Stickies, then select it and drag it to the desktop, you get a *Breakout*-style game that uses the names of the OS development team as bricks.

Jimmie Grillo

Shrieking Pygmy Marmosets Revisited

In your September issue, in your editorial entitled "They Walk Among Us," you stated that you and others around you at the Macworld Expo Keynote began shrieking like pygmy marmosets. I've never heard of such creatures.

Steve Jansson

✍ *Pygmy marmosets are tiny primates, rarely exceeding eight inches in body length, though the tail may add another nine inches. They are playful yet moody creatures, and have active scent glands that they use to stake out their territory and to defend themselves. But really, though ... who doesn't?*

Corrections

In our August issue, the Table of Contents contained some inconsistencies with the contents of the magazine, primarily in terms of page number mismatches.

Also in the August issue, the review of Adobe Type Manager 4.5 incorrectly referred to version 5 in the product box on page 33.

MacHome regrets the errors and has spoken sharply to those responsible. They were sent to bed without their suppers and grounded for a month. MH

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newsWire [News & Products]

By Jackie Dove

Mo' Macworld Gadgetry

Just as we tried to put Macworld (not to mention New York City in July) behind us, alas, reality hit. No Macworld — least of all THIS Macworld — is ever quite out of our data bank, at least until the next one rolls around (January 4-8 at San Francisco's Moscone Center).

A record-stomping 5,500 people attended the keynote address, organizers said, while the final attendance tally for the Expo topped 46,000. The reason? Apple is not only back, it is on the warpath and taking no prisoners.

We already told you about the iBook and its wireless wonder AirPort, but that in no way diminishes the tons of *other* stuff on display at the show. Indeed, 362 companies exhibited products this year, up from 247 last year. At last count, some 85% of exhibitors unveiled new products.



Thus, there is still much to report from the show. For mobile warriors seeking video in/out, **iRez** (www.irez.com) showed off its CapSurePRO, a full-motion, video-capture card for PowerBooks. This product, which will ship at the end of September, inputs streamed video via a camcorder, VCR, or digital camera, and then exports real-time decompressed video to another source or monitor. iRez also demoed its Kritter2 digital video camera for $149, which can watch and record full-motion, full-screen video. The camera features a screw-off mount, enabling it to be attached to a tripod. With the mount in place, the Kritter2 gives you steady images from the top of a laptop screen or computer monitor. ... **Boca Research** (www.bocaresearch.com) announced the Global Village SuperDrive 2X removable storage device for the iMac and USB G3s. It ships in ice (the color, that is) to match your system. This drive reads 120-MB disks as well as the standard 1.4-MB floppies. It's hot-swappable and will sell for $170, when it becomes available sometime this quarter. ... **Connectix** (www.connectix.com) introduced Virtual PC 3.0, its latest Windows emulator. The package, which costs $179 with Windows 98, or $49 with DOS, lets the Mac and PC clients share a single Internet connection. Also, it includes better sound, more USB support, and AppleScript functionality. ... **Power On Software** (www.poweronsoftware.com) demoed Action Menus, which lets you customize your Apple and Application menus or create new menus and keyboard shortcuts on the fly. The company also demoed its new Action WYSIWYG, which lets you view typefaces and font families inside your applications. Both programs will sell for $30. ... If you're looking for a compact flatbed scanner that's easy to carry, check out **NEC's** (www.petiscan.com) PetiScan, a full-color mobile scanner with a USB connection. Say you want to scan images or text from a large-sized document or a thick book. Just turn the scanner upside down and check the scanning area through the see-through window. The best part is the dimensions: 8.5 inches wide, 5.5 inches high, and a depth of 1.4 inches. It reportedly

Casio's New Shooters

Casio has unleashed three new digital cameras that are sure to challenge your imaging inspirations to greater artistic heights.

The **QV-8000SX** is a 1.31-megapixel CCD (Charged-coupled device, which means the number of pixels in the camera's eye that determines resolution) with an optical 8X zoom and a USB connection. You can zoom from 40 to 320mm based on a 35mm camera. A macro feature allows intimate close-ups up to 1cm from the subject. It also has a Night Scene Mode; selection between shutter speed and aperture priority, a Continuous Recording Mode that captures up to five images at an interval of 0.25 seconds, and more. It sells for $699 and is bundled with the necessary software.



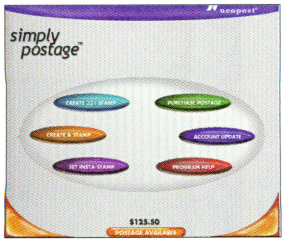
A high-resolution camera, the QV-2000UX, has a 2.11-megapixel CCD, optical 3X zoom and USB connection, and an icon-based graphical user interface for $799. Sliding open the front cover causes the zoom lens to extend from the body.

The company also released the QV-5500SX with 1.31-megapixel CCD, which, for $399, is capable of recording and playback of digital images at 0.5-second intervals. The camera stores images and other photographic information in HTML format, so you can use your Web browser to view your images on the camera's CompactFlash card and display both still images and movies on the screen.

Casio, 800-962-2746, www.casio.com

Macworld continued

sells for $200. No release date yet. ... **Neopost** (www.simplypostage.com) unveiled its Simply Postage, a computer-metering device that downloads, stores, and prints postage. The device is a small (5-1/2" x 6-1/2" x 5") dispenser that connects to your Mac's USB port and prints postage on U.S. Post Office-approved self-adhesive labels. It comes in all iMac flavors. The software facilitates 24-hour user access to the company's Postage-On-Call system for downloading and storing up to $500 worth of postage. ... If you're angling for stunning text effects and graphics for the Internet, print, and video, TypeStyler 3, for $295, is now available from **Strider Software** (www.typestyler.com). Strider began shipping TypeStyler 3 with powerful new features enabling you to create JavaScript rollovers, GIF animations, and Web page layouts. The package also includes 110 display fonts. ... **GVOX** (www.gvox.com) introduced Passport Encore 4.2.1, the latest version of its music-notation software. The upgrade features an enhanced user interface and features designed to make it easier for music teachers, band instructors, and professional musicians and composers to create choral and orchestral arrangements, motion picture scores, or any composition that requires professional arranging. The program, which offers improved MIDI implementation, retails for $600 and gives users the flexibility to make staffs look just so and increase their level of productivity. ... **ImagiWorks** (www.imagiworks.com) unveiled ImagiProbe and ImagiLabs sensor-based hardware/software systems for USB Macs. These science-oriented systems allow students to collect and visually analyze scientific data at school, home, and other locations. It centers on four learning experiences: data collection, real-time data sharing and viewing, annotation, and analysis. It also provides a way for students to collaborate from different locations over local networks or the Internet. General Science ImagiLab costs $469 each; Water Quality ImagiLab costs $649 each.



In the **Life Goes On** category: **Empower Pro** (www.empowerpro.com) released Empower Pro 5.6, designed exclusively for the Mac, PowerBook, and iMac. Empower Pro lets you control access to your computer and password-protect data with a few mouse clicks and keystrokes. Versions 5.6 of Empower and Empower Pro are available for download from the company's Website. Empower costs $59 and Empower Pro is $89. ... **Yashica** (www.yashica.com) has announced the Kycocera Samurai 2100DG, a 2-megapixel digital camera with 4X optical zoom. The camera features automatic exposure control and white balancing, various shooting modes, and playback functions. The lens supports focal lengths from 6.6mm wide angle to 26.4mm telephoto, which equals 35mm to 140mm for a 35mm camera. It is expected to be available later this month. No price is available as yet. ...**Brother** (www.brother.com) has introduced several new printers and multifunction products designed for the iMac and G3. The Brother HL-1240 ($299) and HL-1250 ($399) monochrome personal laser printers both print 12 pages per minute. The former has a resolution of 600 x 600 dpi, the latter 1200 x 600 dpi. The company also introduced the MFC-8300 fax, printer, copier for $499, and the MFC-8600 fax, printer, copier, scanner, and video capture model for $599.

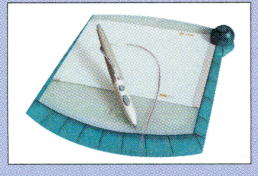


Pens, Tablets, and Mice are Nice!

Thinking of abandoning your favorite (round) mouse in favor of a pen and tablet, but not ready to completely commit? Well, now you don't have to. Wacom has just released **Graphire**, a USB-compatible cordless pen and mouse-graphics tablet set that combines cordless mouse and pen technology, to let you choose your input device at will.



The mouse does not have a roller — and no ball to clean — but rather is flat and provides for easy scrolling with a fingerwheel. When you want more precise drawing, or maybe want to sign your name to a computer document or edit photographs, you can switch to the pressure-sensitive pen. Graphire, which sells for $100, will be available in the last two weeks of September. It is targeted toward home office/small office users. A really nifty software bundle includes MetaCreations Painter Classic and Wacom Pen Tools.



But Wacom isn't the only company that lets you put pen to paper. The new E-pad and DuoPen pen tablet, from **MG Logic** (www.mglogic.com) has a USB or serial connection and comes in both standard gray and iMac blueberry. But if that doesn't jibe with your iMac flavor, worry not: You can also order a tablet base in any of the four other iMac flavors. But that's not all. For $90, you also get MetaCreations' Art Dabbler 2.1. Look for that on or around September 20.

Wacom, 800-922-6613, www.wacom.com

HP's Digital-Imaging Madness

Hewlett-Packard has announced several inkjet printers and digital cameras aimed at home users and the small-office market. The **DeskJet 830C/832C**, a color inkjet that sells for $199, is targeted toward budget-conscious consumers and is designed to produce photo-quality images and family projects. This USB printer carries a print speed of eight pages per minute in black and five pages per minute in color on all kinds of paper. And ... it's got a purple lid. The DeskJet 970Cse is targeted to professionals for photos, text, and color graphics printing. It prints up to 12 pages per minute in black and 10 pages per minute in color and offers two-sided printing. The printer is expected to sell for $399.



Now, say you just want to take some photos with your digital camera and then print them with your printer. Are we missing an important step here? Not any more. HP has announced its PhotoSmart Digital Cameras and printers, wherein you can shoot your images and then print them directly from the camera, rather than having to transfer them to your computer first.

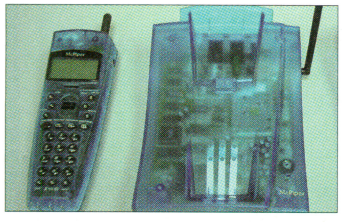
The PhotoSmart C200 digital camera, which sells for $299, is targeted toward first-time digital camera buyers. It has 1-megapixel resolution, 2X digital zoom, and a 1.8-inch LCD for photo preview. The PhotoSmart C500 digital camera, which will sell for $799, has 2-megapixel resolution, 3X optical/2X digital zoom, and wireless printing via infrared technology. Both cameras weigh less than a pound.

What to print them on, you ask? Well, the PhotoSmart P1000 printer, which sells for $399, provides direct printing from many digital cameras, in addition to wireless printing from the PhotoSmart C500 camera. This printer prints at 600 dpi in black and 2400 x 1200 dpi in color on photo paper, and it has a 4" x 6" photo tray as well as USB connectivity.

Hewlett-Packard, 800-752-0900, www.hp.com

Ringgg, Ringgg ... I'll Get it!

It's here — the McPiper USB cordless phone, that is. This translucent phone from Singapore Shinei Sangyo, which has a USB interface, lets you make and take calls from your remote telephone, whether your Mac is on or off. You get voice mail, voice memo (to leave messages for the family), and conversation recording. For $230, it lets you access all messages, which are recorded onto your hard disk, either from your Mac or remotely from the cordless handset. Store the phone numbers friends and family in the handset as a favorite list from which you can select a name and dial. Look for it at the end of September.



SSS also introduced the jazPiper, a new translucent MP3 player, for $200. The jazPiper has 32MB of flash memory with an option to upgrade to 64MB through its SmartMedia slot. It also has a digital voice recorder that lets you store up to four hours with its built-in microphone and a phone book.

Singapore Shinei Sangyo, www.mcpiper.com

Fixing Your Pix

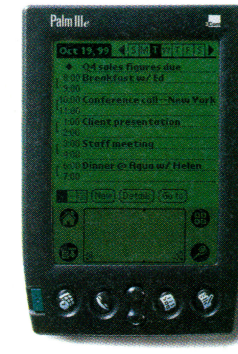
So that landscape shot just doesn't make it — washed out, overexposed. You blew it. Right? Wrong. With Software Architects' **Great Photo! Digital Image Enhancer**, you can take that underwhelming shot and make it into the masterpiece it was meant to be. The software, which sells for $80, corrects image brightness, contrast, and color, allowing you to preview your adjustments in real time. You can compare versions of your enhanced image with the originals or with other versions of the image. You can also rotate and crop images to any selected proportion or size and save them as a JPEG, TIFF, or PICT.



Software Architects, 425-487-0122, www.softarch.com

The Palm that Roared

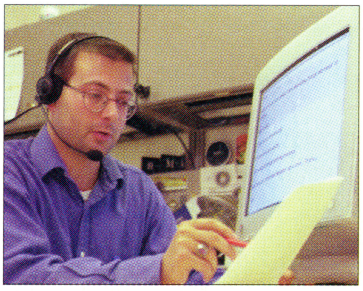
For those who like to hold life in the palm of their hands, Palm Computing has unleashed the **Palm IIIe**, a $229, tiny, handheld organizer for the entry-level market. The Palm III features a liquid crystal display screen and has 2MB of memory. In case you're wondering, that translates into some 6,000 addresses, five years of appointments, 1,500 to-do items (but we know you're busy), 1,500 memos, and some 200 e-mail messages.



It runs the Palm OS software and ships with corresponding Desktop software. Best of all it's got infrared "beaming" for sharing important stuff with your comrades in Palm. Palm is also shipping its PalmConnect USB kit, a cable that allows you to connect your HotSync cradle and cable to your USB Mac. For all of that, you pay $40.

3Com/Palm Computing, 408-326-9000, www.palm.com

You Yak, It Types



IBM demoed ViaVoice for Macintosh, speech-recognition technology that lets you interact with your Mac simply by speaking. Either you talk and it types, or the other way around. While a hands-off interface allows you to edit documents and create e-mail, the product also integrates Apple's text-to-speech function that lets your Mac read text back to you. The first editions, which will come with American and UK English, will be available in time for the holiday season for under $100. Other languages are also in the works.

In other news, MacSpeech has entered into a pact with Philips Speech Processing to create speech applications for the Mac with products targeted toward the education, medical, legal, and general consumer market. Their iListen, slated for release sometime this quarter, includes an American English version and a medical edition. Additional languages to follow will be international English, French, Italian, German, and Spanish, along with their medical and legal vocabularies. Prices reportedly will be in the $150 range.

IBM, 888-411-1932, www.software.ibm.com/speech
MacSpeech, 978-475-8057, www.macspeech.com

No, It's Not a Tea Cozy

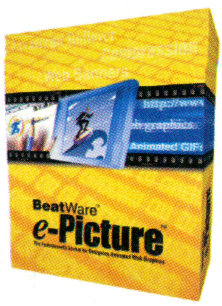


You wanna protect the 'lil thing from dust? You want it to look pretty? **iLidz** understands. iLidz has come out with protective dust covers for your iMac in nine colorful, stain-resistant fabrics (Rain Forest is pictured) that protect it from dust and pet hair and don't make your desktop look yucky. They're $29 plus $4 shipping in the U.S., and you can order them by mail or online.

iLidz, www.ilidz.com

Moving to the Beat

While there are any number of software choices to tackle the project of creating animations for your Web page, a very cool new one is **e-Picture,** a $199 professional Web-graphics program that lets you point and click your way through the process with great dispatch.



e-Picture integrates both bitmapped (pixel-based) and vector (mathematically based) images and can import and manipulate 3D models. Thus, you now have the advantage of creating animations with the photographic properties of bitmaps and the editable properties of vector graphics, all at the same time. In addition, the program creates movement sequences all on the same layer, making your animation easy to edit and change.

Use e-Picture for drawing, applying filters and special effects, editing objects, and adding perspective, as well as tweening (an animation task), previewing, and editing animations. You can even make those neat interactive Javascript rollover buttons.

BeatWare, 650-556-7906, www.beatware.com

Drives to Go!

You already have your iBook and now you need, well, other stuff. Look no further than VST Technologies, which has unveiled a series of ultra-compact **USB hard drives** in matching tangerine and blueberry. The 4GB drives are $330, and the 6GB drives are $430; both will be available this month. USB floppy drives (in fruit colors) cost $90. The company also introduced two types of battery chargers as well as Lithium Ion Batteries and AC and DC power adapters.

VST is also busy with new accessories for the G3: Now available are the FireWire PC Card for $150; bundled with a VST FireWire Hard Drive, it is $100. The VST Smart-Charger, which includes slots for two Apple Lithium Ion batteries and ships with an Apple AC adapter, is $180, while the Ultimate Mobility Bundle includes the Smart-Charger, AC adapter, and Lithium Ion Battery for $330.

VST Technologies, 978-635-8200, www.vsttech.com

Thin Display

If you're looking for some monitor versatility, particularly in the 19-inch range, MGC Technologies has introduced the **MGC-995SN,** a new 19-inch so-called "short-neck" color monitor, specifically designed for offices. That's because it is especially convenient for large spreadsheets, graphic design, and desktop publishing.

The trim model, which sells for $459, affords you greater convenience in arranging your office environment by shaving six inches off the depth of a conventional CRT. Monitor depth measures 16.4 inches, as opposed to the 22-inch depth of most conventional CRTs.

MGC Technologies, 877-428-9642, www.mgcusa.com

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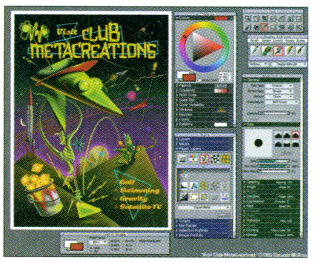


QPS has unveiled the Que! Fire DVD-RAM drive, the FireWire drive for the G3. Good for desktop publishing, archiving, and presentation, it also lets you record DVD-RAM, MPEG-2, and DVD movies for playback on TV or computer monitors. The drive gives you enhanced caching for read/write throughput and a transfer rate of 16.6MB per second. It can read CD-ROM, CD-R, CD-RW, and DVD-ROM media. The package, which sells for $599, comes with Apple software, 5.2GB rewritable DVD-RAM media, accessories, and a carrying bag.

QPS also unveiled its new Que! Fire drive, giving a FireWire interface to its CD-RW drive. The drive has an average access time of 120ms and comes in two models: 6x4x24x — which means write, rewrite, and read speeds — ($400) and 4x4x24x ($300). These read and write data as well as record music on CD-R and CD-RW media. Both models include the CD-mastering software Toast and Direct CD, CD-recordable media, CD-Rewritable media, carrying bag, and accessories.
QPS, 800-559-4777, www.qps-inc.com

New Painter 6 Upgrade

Digital artists, graphic designers, and Web creators, hear ye! MetaCreations has announced **Painter 6**, an upgrade to its natural-media image creation, enhancement, retouching, and compositing program. Painter 6 features updated brush engine technology, as well as several new capabilities to propel your creativity. Painter 6 features enhanced ease-of-use via an updated user interface, faster performance, improved tablet support, and better workflow integration.



Painter 6's new features include the ability to paint in depth with Impasto brushes, run text along a curve, and layer vector and bitmap images in one file for output to print and the Web.

Brush loading lets you pick up color on each individual brush bristle and paint multi-color strokes on your images. You can also paint with patterns, gradients, tubes of patterns, and neon. An interactive image hose sprays rotated and scaled images on your image based on the bearing, tilt, and pressure of your hand. Hundreds of new image hose nozzles are included in the new version.

The program supports the popular Wacom Intuos tablet, pen, and airbrush technology, and sports an updated plug-in host, which lets you add more capabilities using plug-ins such as KPT. The new version will be available at the end of September and costs $399.
MetaCreations, 800-846-0111, www.metacreations.com



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Learn Different



A Guide to Abstract-Learning Software

By Alex Handy

I remember the first educational program my parents bought me. It was called *Speller Bee*, and it ran on our old Atari 520ST. *Speller Bee* was a traumatic experience for me: In an attempt to help kids learn how to spell, the program used primitive speech software to say whatever words you typed into it. Unfortunately, the synthesized voice sounded rather like a sick moose trying to pull its leg from the jaws of a wild bear. It was awful to listen to the thing attempt to say simple words and mangle them.

Thanks to *Speller Bee*, my parents had a hard time selling me on any subsequent learning titles. But over the years, developers have gotten wise to the fact that most kids would rather go to the dentist than play a math game. Some companies, such as Edmark and Lucas Learning, have discovered that teaching basic problem-solving skills can have dramatic effects on a child's ability to learn. This new genre of learning software, probably best categorized as abstract-learning titles, is extremely well represented on the Mac. With one or two of these educational programs, you child will soon be learning "different."

Edmark

Edmark, a division of IBM, is the brains behind the Thinkin' Things series of software titles. The company's main goal is to teach kids *how* to think rather than *what* to think. Bryan Bliel, director of product management at Edmark, sees the Thinkin' Things series as a way to teach kids creativity and self-confidence: "Our activities focus on creativity skills … creativity and

math, creativity and spatial relations."

Each of Thinkin' Things' titles includes open-ended activities, such as in *Skate Park at FrippleTown*. The idea is an offshoot of the old practice of using string and a bed of nails to create geometric patterns. Players choose a set of rules for the skater to follow, such as skipping every third point. From these simple rules, your child's skater can make wildly different patterns with a change of only a few simple instructions. This is perfect for your future computer programmer.

In *Tooney the Loon's Lagoon*, there's creativity-based activity that adds animation to the mix. Using a basic array of shapes, kids can create simple pictures made from triangles, circles, and squares. Once created, they can set them into motion, syncing them up or letting them fly free. With such a simple concept, it's amazing to see the different visuals that can be created when two shapes rotate in opposite directions on top of one another.

Of course, anyone who has kids knows that you can't just sit them down in front of something as daunting as a blank piece of paper and tell them to be creative. That's why all of these activities are resplendent with premade examples to get those creative juices flowing. As Bliel puts it, "We give them a starting point so that kids can modify what's there and make it their own. That's still a form of creativity."

Self-confidence is also a key issue for kids, says Bliel. "The best problem solvers have the confidence to persevere. They don't give up; they know they'll solve it." When kids understand themselves, they can gain confidence. A way for them to discover themselves is to understand what they're good at.

Not content to simply copy Simon Says, Edmark added a twist to its "Repeat after me" activities. You can turn the lights off so that when a pattern is played on the drums, kids have to play it back without any visual clues. At one point during their in-house testing of the software, one of the boys testing the software proved the effectiveness of this activity. He had been repeating the sound patterns easily enough before he discovered how to turn out the lights. Then, says Donna Stanger, General Manager of Edmark "It was like a new kid. His eyes opened wider and he sat transfixed. It showed how this kid learned: by ear."

Vtech

On the other side of the spectrum is Vtech's *Uncle Albert's Magical Album*. In this French title, your zany uncle has left you his cherished scrapbook, in which he kept all of his favorite things, including sketches, insects, stamps, and a hoard of unexpected items. The allure here is the broad range of topics covered in one game. While most learning titles focus on one subject throughout, *Uncle Albert's Magical Album* leaps from topic to topic with reckless abandon. It's not uncommon to learn about the constellations while searching for information about the biology of a frog. Eric Viennot, the game's author, says that he knows "children aged seven to 12 love zapping from one subject to another. I wanted to create rhythm and surprise by treating them to diverse and kid-appealing subjects." (Viennot is French, so the game and his comments have been translated.)

The game takes place inside of the album, and players can jump from page to page at their leisure. Most pages are hidden at the outset, and it's your job to follow each page to its conclusion. The title takes full advantage of the nonlinear nature of its gameplay. In fact, a short attention span is almost a plus, since the solution to a puzzle on one page will probably be hidden halfway through the puzzles of another page. Says Viennot, "The advantage of *Uncle Albert's* concept is that children are hardly ever blocked. When they don't find a solution, they go elsewhere and they find the missing animal or object somewhere else."

Who Says Learning Can't Be Fun?

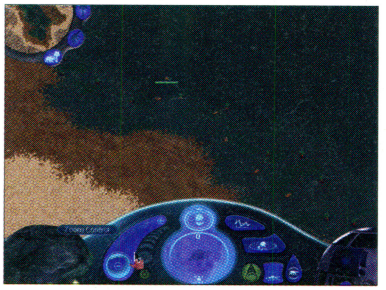
Who says learning can't be fun? *Uncle Albert's Magical Album* is filled with activities that would entertain most adults, let alone kids. To get through one page, you need to stage a race among various animals you've found in the book in order to see which one is the fastest. You pile three animals into the starting gates, and let them loose. Half the fun of this event is trying to catch the animals after the race: most of them don't much like standing still.

At another point, you need to guide a fly through a spider-web maze without touching the web itself. If you do touch it, the spider becomes alerted to the fly's presence and descends for lunch. Here's where *Uncle Albert* really shines. There are a number of ways to accomplish your goal here. First, of course, is to navigate the maze normally, but that's no fun! As the children who tested the software proved, you can also break through the web if you ram it repetitively with enough force. But the most creative solution of all was to lead the fly around the outside of the book, avoiding the web altogether. This solution took even Viennot by surprise, showing him just how powerful his software truly was.

Lucas Learning

Star Wars has always been a favorite among kids. There are few things that can reduce an eight-year-old to putty better than Jar Jar Binks and friends. Lucas Learning's two most recent titles focused on teaching oft-overlooked subjects with the help of the *Star Wars* license. *DroidWorks*, its first title, allowed kids to build their own Astromech droids to accomplish a specific set of tasks. The game used the powerful *Jedi Knight* game engine to present its world in stunning 3D with a familiar set of controls. While most adults wouldn't know the game from Adam, any self-respecting, computer-literate kid has seen *Jedi Knight*. All of this helps *DroidWorks* bring physics down to a comprehensible level for kids.







With its second title, the *Gungan Frontier*, Lucas Learning taught kids about the food chain. Using a basic set of *Star Wars* animals and plants, kids had to set up their own ecosystem and keep it stable. Too many carnivorous Peko Peko birds, and the whole structure would come tumbling down. Too few Yumi Pods or Chak-roots, and the herbivores die out. It's a heck of a balance to strike, and it shows kids just how fragile our world really is.

With its two newest titles, *Yoda's Challenge* and *Pit Droids*, Lucas Learning is pushing its *Star Wars* universe outward, just as its counterparts in the game industry have been extending the *Star Wars* video-game universe. *Pit Droids*, in particular, looks to be a perfect title for the modern progressive-education movement. Your child is in charge of a herd of pit droids, the little two-legged robots that worked on the pod racers in *Episode One*. Unfortunately, these little guys ain't the brightest bulbs on the tree, if you know what I mean. It's your job to get them from point A to point B while accomplishing a set of tasks in the meantime. To do this, you have to lay down instructions for the droids to follow, such as, "Turn 90 degrees left" or "stop and wait." The title seems to be preparing its users for careers as computer programmers — something that should make their parents as happy as Wumprats.

Humongous Entertainment

Humongous' famous *Backyard Sports* series is getting a facelift. No longer content with showing kids how to coach and run a team, the series will be getting some help from professional athletes, such as Jerry Rice and Steve Young. This should be enough to make any young sports fan drool.

Mike Salvadore, marketing manager at Humongous, sees the Backyard Sports series as an opportunity to get kids involved in sports without overwhelming them. "It's the only sports game series aimed at kids under 10. There are a lot of sports games out there that are far too complex for kids to grasp," says Salvadore. The *Backyard Sports* series thrives on simplicity. It's the first experience a lot of kids have with real-time sports, and it's a great way to supplement a real-life love for sports. Kids can get their hands on the rules of a game and the basic strategies needed to win. It's the perfect way for kids to while away a rainy day, and now they can do it online.

Humongous has just launched its Junior Sports Network at *www.jrsn.com*. The Website allows kids to chat about the *Backyard* series and even play against one another. Kids will learn about the games from each other and track the stats of their players. This all helps foster a feeling of teamwork. Says Salvadore, "Once kids latch onto sports, they're learning that team-player mentality."

Techno-Toddlers

Let's face it: your seven-year-old probably understands your computer better than you do. That just goes to show how much kids can learn from using a computer. And with these titles, they'll be learning more than just math or spelling. The new wave of "outside the box" learning titles are helping to reinvent learning software, and in some cases, helping to reinvent learning.

So before you rush out and buy Junior the latest game for his birthday, pause for a moment to look at some of these titles. They all have one major thing in common: they're fun. While your child might be turned off by the idea of an educational game, after a few minutes with any of these programs, he or she won't have to worry about nightmares from bad learning software. MH

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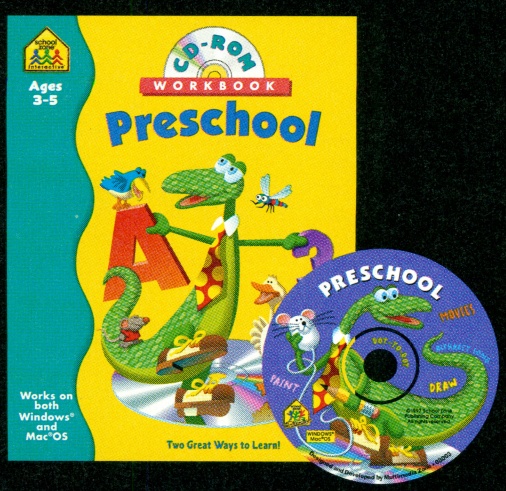
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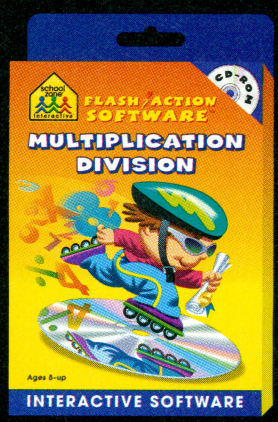
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Look! iBook!

Educators' First Impressions by Alex Handy

Now that the iBook has been shown to the world, the education community is going to have to do some major overhauling. After the keynote in New York, Apple got together with some of its Distinguished Educators and held a Q&A session to find out just what they did right, what they did wrong, and what they didn't do at all. An Apple Distinguished Educator is a superb educator who is both innovative in integrating technology into the curriculum as well as passionate about Apple products and services. We spoke to some of those educators to get their feelings on the iBook. So what's the verdict? While it may not be perfect, they all feel it's definitely cool and definitely powerful.

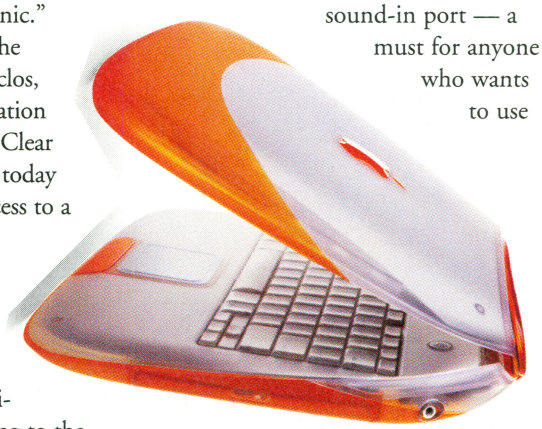
Style is a key factor for kids. As Werner Liepolt, Coordinator of Technology at Coleytown Middle School in Conneticut, says, "Kids fight over what color iMac they get to sit at." With an iBook in hand, "teachers won't have to go to the lab; the lab will come to them with every student," says Otto Benavides, professor at California State University, Fresno, College of Education.

But what about the gap that will most certainly exist between students with iBooks and students without them? While some may consider this to be a dicey issue, the general consensus from those we spoke with was that better equipment does not ensure educational success. "Computers don't teach kids. Teachers who learn to use technology effectively will see a marked increase in student performance. Those who don't will see no change," says Dr. Howard Pitler, principal of Brooks Middle Magnet School in Wichita, Kansas. As Benavides puts it, "A mechanic does not become a better mechanic because he has better tools. However, if he has better tools and he learns to use them productively, then he is a better mechanic."

Of course, this puts a lot on the shoulders of teachers. Patsy Lanclos, lecturer for the College of Education at the University of Houston at Clear Lake, Texas, says that "Students today live in a digital age and have access to a variety of digital and other electronic tools outside school. [Therefore] teachers cannot continue teaching with their laminated lesson plans." Pitler foresees a move from traditional "sage on the stage" teaching to the newer "guide on the side" technique.

The newest member of the Apple buzzword family is Airport, and it's on the lips of every school's technology coordinator. "With the Airport, students and teachers can simply turn on their iBooks and hit the network." Says Pitler. There'll be no need to run wires through the old walls and ceiling structures of schools that were designed before Ethernet had been invented. With just a few Airport hubs and a fleet of iBooks, schools can quickly and cheaply allow their students to harness the power of the Internet.

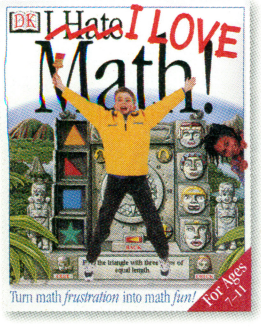
There are some concerns over the iBook's specifications, however. Benavides says that "If teachers are to adopt the iBook, they will need to display their desktop via a projection device. The iBook needs a video output." Another concern is the rather small amount of RAM included. While 32MB might have been enough a year ago, it's quickly becoming a less-capable amount. Liepolt begs for a sound-in port — a must for anyone who wants to use their iBook in music class or with voice-recognition software And speaking of the arts, the iBook also opens the doors for a rebirth of the art class. Just think of the sight of rows of children all creating masterpieces with their iBooks hooked up to drawing tablets or video cameras. Finger painting will take on a whole new meaning, thanks to the touch pad.



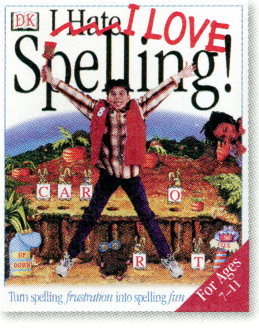
The educators have spoken, and while they may have their own bones to pick with the iBook, they can all agree on one thing: the iBook is the best thing to happen to technology in education since the computer lab. Now, the only problem students will have this fall will be figuring out goes with a tangerine iBook. MH

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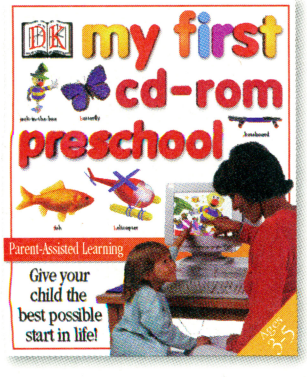


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Attack of the Laser

A Look at Four Lasers



SuperScript 1800

By David Weiss

When the first laser printers hit the streets in the early '80s, it became possible for schools, libraries, and small businesses to crank out their own, professional-quality documents. Then, when lasers came into the home, everybody and their sister became an overnight desktop-publishing dynamo. And laser printers are sharper and faster than ever. Here, we took four lasers that cost under $1,000 for a spin.

But What about those Inkjets?

Ah, the million-dollar question. Or the one or two hundred-dollar question, as the case may be. The biggest point of decision is whether or not you want color. Unless you spend a bit shy of $2,000, you're not going to get color on a laser. But the laser advantage is speed and cost of use. Lasers are still faster than inkjets at cranking out the pages, but inkjets are slowly catching up. Lasers also provide, for the most part, much smoother text, so if you're printing out résumés or wedding invitations, it's the laser that's going to give you that razor-sharp look. Also, the toner cartridges in lasers last a long, long time. The cartridges in inkjets, on the other hand, tend to run out rather quickly, and they cost upwards of $30 a pop. Plus, you have to buy one for color and one for black, typically. And finally, most inkjets are finicky about what kind of paper they print on — they save their best work for the finest paper, which can cost as much as 25 cents a sheet. In contrast, lasers feel pretty comfortable printing on regular old bond paper, and most allow you to print on envelopes and card stock. Finally, lasers usually sport vast paper trays, whereas the paper trays on inkjets tend to be slim.

Meet the Printers

We looked at four lasers: two from Lexmark and two from NEC. There are two or three others out there, but they weren't available at press time or we've reviewed them already. We were eager to try out Lexmark's new Optra E310, a budget-priced laser ($399) that speaks to the Mac via USB.

Printers

This is certainly one of the first USB lasers, but there are more on the way. By the time you read this, Brother will have released the HL-1240 ($299) and HL-1250 ($399), two very affordable lasers indeed. Also, GCC Technologies, maker of the Elite 12/600, is coming out with a USB version. And Epson, the maker of fine inkjet printers, is rumored to be entering the laser ring, but we weren't able to scare up the details. We'll have to see what it comes up with. The Docuprint P1202, from Xerox, is a $699 laser that supports USB, but only on Windows as of press time, so we'll wait 'til it supports USB before we run it through our mill.

We next turned our attention to printers that speak over Ethernet. In this regard, we tried out Lexmark's higher-end home laser, the Optra K1220, which goes for $669. From NEC, we looked at the SuperScript 1260N and 1800N, for $499 and $999, respectively.

The Basics

NEC's SuperScript 1260N is a large, robust, laser-printin' workhorse with an ample paper tray that can hold 250 sheets. It has a square design, in stark contrast with the SuperScript 870, which had an exposed paper tray and a towering, wave-like design. It does not support PostScript, which is partly why the printer is so affordable. A simple display of six indicator lights tells you its status — whether it's on, whether it needs paper, and so on.

The SuperScript 1800 is its bigger, bolder sibling. It comes with a feisty 500-sheet paper cassette that sports a nifty feature — a window with an orange indicator that shows you roughly how much paper you have left. Not content to tell you its status by means of simple indicator lights, the 1800 has a small LCD used to navigate through a series of detailed menus and print various reports on its setup. This is a PostScript printer, and that's mainly why it costs what it costs.

Lexmark's Optra E310 is a small, lightweight printer for the desktop. It doesn't have PostScript, per se, but it does have PostScript emulation (See sidebar). The paper loads in from the top, similar to the way you load the paper into an inkjet, and the printed sheets emerge from a vertical slot at the front. And as with many inkjets, you can only load about 75 sheets at a time. This printer has a series of six status lights on the front panel.

Lexmark's K1220 is the larger, networkable, square-shaped printer with a 250-sheet paper cassette. And like the SuperScript 1800, it has an LCD on the front panel. This baby is heavy, which I found reassuring — it's probably filled with some mighty sturdy parts. And this one, as you might expect, supports PostScript.

Howdy, Stranger!

I have to say that none of these printers is extraordinarily Mac-friendly, but the



Optra E310



SuperScript 1260N



Optra K1220

PostWho?

So what exactly is PostScript, and why might you be willing to spend an extra $300 or so for a printer that has it? What does it get you?

Let me give you the most graphic example. Say you have a newsletter and you want to import your company logo, but your artistic instincts tell you that you'd like to stretch out logo a little bit. Your logo is an EPS (encapsulated PostScript) file, which is the perfect format for logos: You can resize the graphic to any dimension, and it will still appear smooth and clear. If you print your newsletter on a non-PostScript printer, however, it will appear blocky and pixelly. If you print it out on a PostScript printer, your stretched-out logo will look fine.

PostScript is a language that tells a printer where to put the dots. Adobe Systems developed the language in 1984, and it opened up the source in the years that followed, so that various manufacturers could modify the language to suit their individual products. Soon it became a veritable standard, and because it gave the home user the same precise control over images as the high-end professionals, PostScript played a strong role in helping to spawn the revolution known as desktop publishing.

Occasionally, you will find PostScript emulators in printers. But is there any difference between these and official Adobe-licensed PostScript? Tricia Gellman, Senior Marketing Manager at Adobe, says that one advantage of authentic Adobe PostScript is that you will have the most-advanced, latest version. For example, she says, "Some blends might come out looking less smooth if you don't have the latest version of PostScript."

Many laser printers either have PostScript, or a PostScript emulator, and if they don't, many allow you to purchase PostScript as an option. Inkjets, on the other hand — especially inkjets designed for the home — don't usually have any "hard-coded" languages built into their engines. Infowave, however, provides a $99 piece of software called StyleScript, which brings bona fide Adobe PostScript to many inkjets.

So who is PostScript for? Will you need PostScript if you're going to print out letters, e-mails, and Web pages? Nope. If that's what you're printing, you don't need PostScript. But if you think you might want to get into designing newsletters, posters, or greeting cards, you might want to look into PostScript.

NEC printers are by far the friendliest. Although the Setup section of the manual for the SuperScript 1260N assumes you're using Windows and makes no mention of Mac, there is good documentation in the Network sections of the Quick Install Card as well as in a separate Network manual. It comes with a Mac driver on a CD, and after installing this driver and connecting the printer to your Ethernet port, the SuperScript driver will appear in the Chooser, and you'll be ready to go. If you already have an Ethernet network, just run an Ethernet cable from the printer to the nearest Ethernet hub. If you don't have an Ethernet network, never fear — just purchase an Ethernet Crossover cable from your local computer store, and run the cable from the Ethernet port on the back of your Mac to the Ethernet port on the printer. Believe it or not, you now have an Ethernet network. If you have an older Mac, you might not have Ethernet, but most Macs can be upgraded to include this option.

The 1800 is also fairly easy to set up and use. Because it's a PostScript printer, it works a little differently than the 1260N. When you run the installation, a PPD (PostScript printer description) for the 1800 is placed in the Extensions folder in your System folder. Then, when you select the LaserWriter 8 driver in the Chooser, assuming the 1800 is turned on and is connected to the network, you will see the 1800 appear under the list that says, "Select a PostScript Printer." Select it, then click "Create." Your Mac will then find the proper PPD, associate it with the LaserWriter driver, and then you'll be ready to roll.

The Optra E310 is a unique piece of work, being one of the first Mac-compatible USB laser printers. But it has a long way to go in learning to be Mac friendly. It has no Quick Start guide for the Mac, and I was hard pressed to find mention of the Mac in the manual. The CD was equally baffling: It installs a folder called Lexmark Extras on your hard disk, containing an application called MarkVision for Macintosh. I could find nothing in that folder telling me anything like, "Click here to get started," and I could not figure out the purpose of MarkVision. When I read the ReadMe file, my eyes glazed over, because the text I found therein had nothing to do with my burning need, which was to *get started.* Because this is a revolutionary new printer, hopefully Lexmark will improve upon its charisma in the coming months.

After consulting with Lexmark, I learned this is what you need to do: You need to start up the Apple Printer Utility Version 1.2, which ships with MacOS 8.6. Due to a bug in Apple's installer, your Printer Utility won't be updated if you upgraded from 8.5, so beware — you might need to re-install System 8.6 in order to get the right utility. So, you double-click on it, select USB from the dialog box, and hit "Create" to select the right PPD (which was installed when you installed the Lexmark Extras on your hard disk) to create a Desktop Printer icon on your Desktop. Then you need to call up the PPD one more time to select the printer as a PostScript printer. Finally, choose "Set printer as default" from the Finder's Printer menu, and you're set.

Setting up the K1220 is easier, but it's also a little vague. The manual directs you to the CD, which is very similar to the one for the E310: It installs Lexmark Extras on your hard disk, and assumes you know that it has just slipped a K1220 PPD into your System folder and that you know what to do from there. Fortunately, I did know what to do, but it would be nice, to say the least, if the instructions were written down on

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The Printers

	Interface	PostScript?	Memory	Speed	Image Quality	Charisma	Overall Rating
Optra E310 $399, Lexmark 800-539-6275 www.lexmark.com	USB	No	2MB	Fair	Good	Poor	●●●
Optra K1220 $669, Lexmark 800-539-6275 www.lexmark.com	Ethernet	Yes	2MB	Good	Good	Fair	●●●
1260N $499, NEC 800-632-4636 www.nec.com	Ethernet	No	2MB	Fair	Good	Fair	●●●
1800N $999, NEC 800-632-4636 www.nec.com	Ethernet	Yes	20MB	Good with Text	Good	Fair	●●●

a card somewhere. But the steps are fairly simple: Once you've run the installation, connect the printer to the Ethernet port, turn it on, and select the "LaserWriter 8" driver in the Chooser. When the K1220 appears, click "Create," and your Mac will find the correct PPD and use it to set up the printer. Once you do that, you're set.

Image Quality

In terms of image quality, let's compare the little guys to the little guys and the big guys to the big guys. Between the Optra E310 and the SuperScript 1260N, the Optra came out with smoother lines. Neither printer has bone fide PostScript, but the emulation in the Optra is much better. It rendered a stretched illustration very smoothly, whereas the NEC interpreted the stretched curves with blocky squares. With other images, the E310 drew much smoother lines. However, with some PostScript-heavy images, the E310 would just inexplicably flash the red error light, which was frustrating, since I didn't know what to do. I ended up just taking those images out of the testing routine. The SuperScript displayed finer gradients, so photographs and other images with subtle blends look smoother than on the others. The two big guys were both noticeably smoother than the less expensive printers were, and they displayed finer gradients. Between them, the 1800 and K1220 produced similar output.

Speed

In terms of spitting out pages of text at 300 dpi, all four printers actually came very close in our tests, despite their having different "pages-per-minute" claims. Still, NEC's 1800 came in as the quickest. In printing from Adobe Illustrator, which is a PostScript-heavy application, I found some curious results: the PostScript printers — the SuperScript 1800 and Optra K1220 — were about twice as slow as the E310 and 160, which use emulators. In printing from QuarkXPress, another PostScript-heavy application, the 1800 came out noticeably slower than the K1220.

Choosing a Printer

On the lower end, the SuperScript 1260 is a pretty good bet. Although it stumbled over the rendering of PostScript, it never completely choked on an image, the way the Optra E310 did. The Optra, though, produced very fine-looking, smooth curves. On the higher end, though it was a little more difficult to set up, the K1220 came out a little faster than NEC's 1800, especially with complex Quark documents.

But in the $999 price range, none of these printers was as friendly, as fast, or as smooth as the one which we reviewed in March, 1999, *MacHome:* Hewlett Packard's 2100TN. MH



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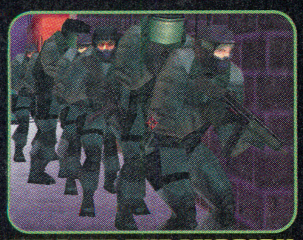
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HOME SCHOOLING RULES!

HOME SCHOOLING GETS A BOOST FROM RESOURCES, CURRICULUM, AND EVEN VIRTUAL SCHOOLS ON THE WEB

BY ERIC J. ADAMS

Maybe your home is too far from the nearest schoolhouse, maybe your local school board doesn't share your educational philosophy, or maybe you simply like to spend four to six hours daily explaining trigonometry equations and the subtler points of Homer's *Iliad* to your own kids. If any of the above is true, home schooling may be for you. It's working for a growing number of Americans across all social, economic, religious, and political lines, according to its proponents.

The most dramatic change in home schooling over the last ten years has been the computer. "Home schoolers are a surprisingly tech-savvy bunch. And multimedia and the Internet are changing what once was a cozy cottage affair," said Michael P. Farris, president of the Home School Legal Defense Association (HSLDA) (www.hslda.org).

While the quality of a home-school education varies dramatically, based on parental expertise and involvement, on average, home schoolers outperform their public school peers by 30 to 37 percentile points across all subjects, according to the HSLDA. Just how prevalent is home education today? Some 1.23 million American children are being taught at home, according to the HSLDA. Those numbers exceed the total public school enrollment for the state of New Jersey, which has the 10th largest student population in the nation. Put another way, there are more home-school students nationwide than there are public school students in Wyoming, Vermont, Delaware, North Dakota, Alaska, South Dakota, Rhode Island, Montana, and Hawaii — combined.

Most parents teach their kids at home to teach specific philosophical or religious values, to control social interactions, to develop close families, and to promote high-level academics, according to the National Home Education Research Institute (www.nheri.org).

But home schooling doesn't have to have political or religious underpinnings. Nor does it have to be a full-time affair; many parents are supplementing their children's public- or private-school education with resources gleaned from the home-schooling world. Where once you had to send away for home-schooling catalogs to find appropriate curricula, now all you need is to get on the Web and download curricula, often for free.

There is, and always will be, a sector of the home-schooling population that shuns technology, believing that technology can have a dehumanizing effect on any form of instruction, according to Farris. "A great part of the desire to home school involves the heartfelt conviction that a parent needs to personally influence a child's life through intensive interaction. These parents will always want to provide as much of their child's educational experience as possible, and technology doesn't fit in," said Farris.

But Farris is on the flip side of this philosophical debate — he's a great proponent of technology in the home schooling arena. "Two factors will make educational technology primarily a positive influence," he says. First, most home-school parents aren't using — and won't be any time soon — technology for the majority of their children's lessons. Rather, they'll continue to provide a mix of traditional home-schooling curriculum, home-grown lessons, and technology-based education.

Secondly, as most Web users already know, technology permits much greater human interaction than has been possible before. More interactivity is already here by way of interactive classrooms on the Internet (more on this later), and soon live video Webcasts, as well as new educational channels, via the use of Direct Broadcast Satellites (DBS). DBSs allow eight to twelve channels to be compressed into the space formerly occupied by one. Unfortunately, DBS is poised to arrive on the market in two to three years, at the same time as videocasting on the Web, where the number of channels available will be virtually unlimited.

Still, though he favors home schooling, Farris warns against the overuse of technology: "Technology can be of great assistance to home-schooling parents, but no one should think that a child's complete education can be offered through computers. Great education of the future will be both high tech and high touch. Home schooling succeeds in large part because it offers the greatest forum of high-touch education available."

Differing Needs

In the early grades, technology is being used to relieve the home-schooling parent from a number of routine tasks that are just as well done on a machine. Memorization of basic math facts can be done with computerized flash cards in a way that a child will enjoy. And, of course, technology is being used to enrich the educational experience. "When I took my oldest daughter to Versailles, she understood how easy it would be for the French revolutionaries to condemn the gaudy excesses of the regime that it toppled. Technology allows parents — even those with out frequent-flyer awards — to take their child on a tour of Versailles," said Farris.

THERE ARE MORE HOME-SCHOOL STUDENTS NATIONWIDE THAN THERE ARE PUBLIC STUDENTS IN WYOMING, VERMONT, NORTH & SOUTH DAKOTA, RHODE ISLAND, MONTANA, AND HAWAII – COMBINED.

But it's in the secondary levels that technology is playing the biggest role. "Home-schooling children of the future will have the ability to go into a chemistry laboratory and participate in experiments, interact with lab scientists, suggest different alternatives, and watch the results live on their computer screen," said Mary Pride, author of Practical Home Schooling.

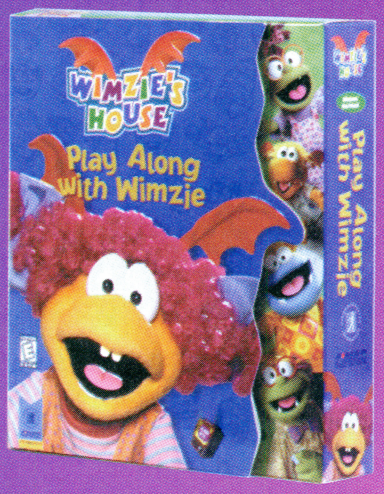
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me2school, *www.primeservices.com/me2school/.* Offers abcs, numbers, and math recognition for home-school preschoolers.

American Home School Publishing, *www.ahsp.com.* Provides links to educational resources and products from over 50 publishers at discounted prices. The site claims to have reviewed thousands of products and selected only suitable material for home-school families.

Christa McAuliffe Academy, *www.cmacademy.org.* Accredited K-12 Internet school providing educational services for home schooling and distance learning families worldwide.

Homeschool Associates, *www.homeschoolassociates.com.* Serves 70,000 home-schooling families with nationwide conferences, applied curriculum, a bookmobile (158 cities a year), transcript and diploma services, and more.

Homeschool Central, *www.homeschoolcentral.com.* This is a great starting point, with links to home-school needs and resources, state by state.

Homeschooling Today, *www.homeschoolingtoday.* Online magazine with a vast array of resources, teaching tips, and practical encouragement for home schoolers and home educators.

The Trent School, *www.theschools.com.* An inexpensive, Internet-based home school, grades 1 through college.

InterNETional HomeSchool NETwork, *thehomseschoolnetwork.com.* One of the newest companies on the Internet, providing Web-based schooling for home schoolers of all ages.

Islamic Educational and Muslim Home School Resources, *http://home.ici.net/~taadah/taadah.html.* Offers Islamic educational resources for the public, private, non-Muslim religious, and home-school classroom, as well as resources for the Muslim home school.

Learning Network, *www.efn.org/~learning/.* Home-schooling support group and alternative school, featuring information and a newsletter.

Montessori at Home Home-Schooling, *www.efn.org/~learning/.* For parents interested in applying the Montessori method at home; free online resource newsletter.

Nationwide Home School Newspaper, *www.homeschoolnews link.com/.* Bills itself as the nation's home-school newspaper online. Articles and resources on all aspects of home schooling, and regular features and columns on math, grammar, art, and advice.

Sports Break, *http://rdpnet.com/sportsbreak/.* Offers physical-education classes for home schoolers.

The Homeschooling Zone, *www.homeschoolzone.com.* An online virtual community of home schoolers, after schoolers, parents, and educators.

The Internet Home School, *www.internethomeschool.com.* Offers online curriculum for students of all ages.

The Sycamore Tree Center for Home Education, *www.sycamore tree.com.* Offers a complete home-school program for kindergarten through high school diploma. Mail order catalog of over 3,000 educational materials available.

Waldorf, *www.live-education.com.* Waldorf-oriented families can find home-schooling needs and curricula from kindergarten up.

Home Computer Market, *www.homecomputermarket.com.* Assists home-school parents by reviewing and selling quality software.

Home Schooling Chat Room, *http://venus.beseen.com/boardroom/j/17251.* Discussion board for home-schooling parents with home-schooling questions.

home-schooled students. These students still score higher on math tests than their public school counterparts, but the differential is not nearly as great as in the lower grades, indicating a weakness in this area. "If anything can be taught well on a computer, it's mathematics," said Scott Somerville, a former computer programmer and home-schooling advocate in Salem, Oregon.

Resources Galore

It's odd to say that multimedia is an "old" technology, but it precedes the Internet by a good ten years. And, as any good Mac enthusiast knows, there are hundreds of CD-ROM- and disk-based educational programs available in online and mail order catalogs and via the many links to the sites listed below.

The most dramatic change to home schooling, however, comes not from disk-based multimedia but from the Internet — as a dynamic resource, a source for curriculum, and most promising of all, as a virtual classroom.

In growing numbers, parents are enrolling their kids in Internet schools, such as the Trent School (www.theschools.com), the Internet Home School (www.internethomeschool.com), the InterNETional HomeSchool NETwork (the homseschoolnetwork.com), and the Christa McAuliffe Academy (www.cmacademy.org).

These schools emphasize individualized instruction, using computer courseware delivered over the Internet. Student success is measured through mastery tests and a combination of written assessments and lab/practical learning activities. These schools offer advanced math, literature, and science classes, and in the near future, they'll be carrying live video classes for home-bound students.

Often the courseware is self-paced with the added insurance that the lesson plans are formal and balanced, so parents can access both the school's capabilities and their child's progress. Professional staff members are available to work with gifted and special-needs students, and counselors are often standing by to assist parents. The schools bestow honors and standard diplomas, and while accreditation varies from school to school and state to state, Internet schools offer a greater chance that a home-school education will be valued by colleges, according to Farris.

Tuition for the schools starts at $500 a year per student, often with no additional fees for books or courses.

Getting Started

With over two million parents involved in the home-schooling movement and tens of millions more interested in enhancing their children's educational experience at home, it's not surprising that Internet resources are plentiful. For better or for worse, there aren't any big brand names involved in this market. Consequently, Websites vary greatly in quality, from deep and thoughtful exposition to ranting political diatribes to "what we did last summer" home pages.

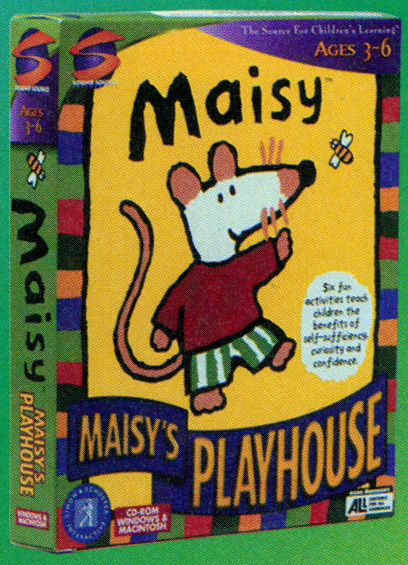
But the Internet has the potential to take home schooling to a new level of acceptance, according to Farris. "I used to believe that I would live to see home education represent only 5% to 7% of all school-aged children. With the prospects I now see available from high-tech education, and the simultaneous advent of home-bound office workers, it is not too much to believe that 40% of all children will receive at least some material portion of their education at home in the next 10 to 20 years."

If you are seriously contemplating home schooling, you'll have plenty of questions, such as: Is it legal (yes, in all fifty states); is curriculum available (yes, by the gigabyte); will my child be able to go on to college or the military (yes, but it's a good thing to administer annual achievement test scores for the high school years, in addition to the SAT); will my kids learn to socialize (by most accounts, remarkably well); and what's truly required of parents (a nearly full-time commitment)? VIII

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By Ted Cuzzillo

Write Your Own Ticket

AppleScript and the Home Office

I don't know how my little business of frying and shipping cannoli shells got so big so fast. In less time than I can slap my forehead and cry, "Holy cannoli!" I get new e-mail orders for another five dozen cannoli shells — spicy, fried tubes into which confectioners stuff cheese filling to make everyone's favorite Sicilian pastry.

Each order requires a series of routine steps: take e-mail orders and enter them into the database. Subtract inventory. Print a label. Then there's the task of updating the Website with new recipes and other marketing info. On and on into the night.

Squeezing this business in between a day job and sleep sometimes seems more than I can take. Then a friend suggested I use AppleScript, built into most Mac systems. It can lash together Eudora, FileMaker, Excel, and other applications to take care of the housekeeping while I get some sleep.

Unlike applications such as FileMaker, AppleScript offers few hints of what it can do. It has no pull-down menus of its own that give you a quick overview of functions.

Instead, AppleScript is mostly a middleman. It makes applications cooperate, lending them synergy. Unlike macros, it can "decide" what to do based on conditions at hand. It automates repetitive steps — and behind all good cannoli, of course, there's always a million repetitive steps.

So looked into what I could do with AppleScript — using custom scripts written by hired scripters or ready-to-use scripts available for download. What makes this language so attractive is that, unlike Perl, Java, and even deeper, more complicated languages, AppleScript's near-human syntax makes it easy to dive into. And as you learn it, you can tweak and build upon your earlier efforts.

The first place I looked was order processing. Night and day, cannoli-crazy customers from all over the U.S. log onto my Website and punch in orders. A bakery in Detroit orders three dozen, a caterer in Moonachie orders five dozen, and someone in Santa Monica orders a few dozen. It all adds up, thankfully.

After I come home from my day job and have dinner, I check the orders. I have up to 25-dozen cannoli shells due each day.

Each e-mail order has come straight from the order form on my Website. Each order — with name, address, phone, and number of shells ordered — has been appended to a file on the server. Once a day I download the file, then import it to my FileMaker database.

With AppleScript, I can have a scriptable ftp (file transfer protocol) application — such as Fetch, Anarchie, or Mac OS 8.6's built-in URL Access — log on, download the orders, and import them into FileMaker while I'm still winding pasta around my fork.

FileMaker keeps track of day-to-day orders and the all processing, packaging, and shipping. It also prints labels.

While FileMaker's tracking orders, Excel keeps track of cannoli shells and raw ingredients on hand. It compares my inventory of flour, shortening, spices, and Marsala wine with what I need to fill orders. And it tells me when to order new boxes for shipping.

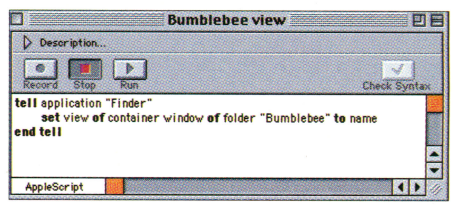
So I have AppleScript also import the new orders to my Excel worksheet. There I can see at a glance where I stand with the orders — and also how much money I'm making.

To make sure I keep making money, FileMaker prepares invoices and prints all current and past-due bills.

The only thing AppleScript can't do is fry the shells. I'll show you a glimpse of AppleScript in this simple example:

• Go to the desktop and make a new folder. Name it "Bumblebee."

• Open Script Editor, the AppleScript scripting application that comes with the MacOS.



• Type this text:

tell application "Finder" set view of container window of folder

"Bumblebee" to name
end tell

- Click on "Check syntax."
- Click "Run."
- Open "Bumblebee," which will now be in List Format.

Dialing for Cannoli

One thing I sometimes worry about is missing the urgent orders — the last-minute wedding, the sudden reconciliation, or the unexpected graduation. My customers fire off e-mail to me, pleading for an emergency shipment.

With the scriptable alphanumeric pager from PAGE Now! by Mark/Space, I can get the urgent message no matter where I am.

To accomplish this feat, Eudora periodically dials in and checks for e-mail. It runs its filter, and if it catches e-mail flagged high priority, it calls my pager and enters the e-mail.

Web Updates

The other big chore is maintaining my Website. Even though AppleScript balks at writing reviews of cannoli makers, it does modify pages and uploads them while I mop up cannoli crumbs.

Every day, customers and others send me names of new cannoli sightings. Italian delis and restaurants around the U.S. try and try again to produce authentic Sicilian cannoli that's worthy of respect.

The update process starts out the same as orders: Users type info into my online form, and the data is added to a file on the server. I download the file manually. I could let AppleScript do it, just after it downloads the new orders. It can download the new reviews and have FileMaker import them to the review file.

After I edit this new text, FM can have a calculation field add HTML coding. AppleScript will then ask FM's own scripting to run a series of finds and exports — with each export headed for a different Web page. For example, it first finds and exports records for the page on California cannoli makers, then New York makers, then Seattle makers, and so on. Each export of coded text is sent to the appropriate folder.

As each new file lands in its folder, an AppleScript Folder Action springs to life. These handy inventions of OS 8.5 enable you to attach an AppleScript script to a folder. Folder Action scripts can respond to a number of events.

The Folder Action script takes the text and tells BBEdit, a scriptable HTML editor, to insert the coded text in specific places on specific pages on my Website.

When that's done, the script has BBEdit log on and upload each page to the server.

Get More out of Windows on a Mac

Another regular chore is checking site traffic. This chore, too, involves logging onto my ISP and downloading a file — this time the traffic log. Then I open Virtual Webtrends, and within it open the traffic log. AppleScript can download the traffic log by itself and open VirtualPC, a Windows emulator. Things get even easier with Virtual PC 3.0, which was just announced at MacWorld Expo. (See sidebar.)

Look at All the Resources

When I realized AppleScript could do all this, I went looking on the Web for more. And I found more.

Virtual PC

The newly announced VirtualPC 3.0 is scriptable down to the keystroke and mouse click, according to product manager Kathy Westergaard. Everything in Windows can be run with keyboard commands, which by itself constitutes a significant advancement. See NewsWire, page 10 for a tiny bit more VPC 3.0.

Learning the Ropes

Many of the tiny scripts you find on AppleScript sites do one little thing, like empty the trash. Why bother? Because if you know just a little AppleScript, you can make all those little scripts work together. And you can tweak and build.

There are several places to start. A good one is Apple's own training modules, downloadable from the AppleScript site. Each module seems to be written from the same point of view that made Macintosh famous in the first place: for people who don't care about computers, and who just want to get something done on one.

They start from the most basic level. For example, AppleScript is a language that has a "conversation" with applications. Apple Events are like applications sending "e-mail" to each other. The advantage over macros? AppleScript can "think."

The module goes on explain the essentials of Script Editor and basics such as changing a "property" of a given object, in this case the label of a folder.

Further modules progress into desktop printing, controlling users and groups, your network connection, using AppleScript help, and "essential subroutines" to build scripts.

If you prefer plowing through a book, the good news is that Danny Goodman's classic, The Complete AppleScript Handbook, is back in print. Though the book has not been revised for AppleScript's current version, much of it is still valid. Another well-liked book is AppleScript for Dummies by Tom Trinko, though it too hasn't been updated.

Once you've learned a few AppleScript basics, you might consider AppleScript maven Geoff Duncan's advice: Read other people's scripts. Dissect the scripts and figure out how they made it work.

When you run into a hitch, ask on one of the AppleScript discussion groups.

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Among the abundance of scripts, there's a script to tell Eudora to collect your e-mail; one to clear Netscape Navigator's cache; and others to generate file names for PC users (eight characters + three-character suffix), change a file's type and creator codes, run mail merges from a FileMaker database (no spamming please!), check your e-mail at 7:15 a.m. so it's ready when you sit down, and nuke V-cards and other inane attachments.

I also saw many scripting additions ("osaxen" to advanced scripters), which provide more features.

Imagine a whole system decked out in scripts, shaving minutes off here and there — all of it amounting to minutes and perhaps hours of extra productivity — or even more sleep. If you harness a few of them, you might not save work hours but possibly a few brain-cell seconds. They add up.

With so many scripts on hand, you need some way to organize them. Apple's new OSA Menu does that by adding a system-wide scripts menu to the menu bar, with contents varying by application. (Included on the Mac OS 8.5 CD in the "CD Extras" folder, or download it from Apple's AppleScript site.)

Among the scripts I found on the Apple site would, according to the description, download an image from one of the many Webcams and make it my desktop's background. Now all I have to wait for is someone in Palermo, Sicily, to set up a Webcam. It'll be just one more way that AppleScript lets the New World meet the Old World.

Book Nook

The Complete AppleScript Handbook
by Danny Goodman
www.dannyg.com/recentwriting.

AppleScript for Dummies
by Tom Trinko

Online Learning & Resources

The Web has a lot of good materials for learning AppleScript and sharing your scripts. These resources make excellent starting points:

- **Apple's AppleScript site**
www.apple.com/applescript/
- **Apple's AppleScript modules**
www.apple.com/applescript/help_mods.html
- **Apple's list of resources**
http://til.info.apple.com/techinfo.nsf/artnum/n16853
- **Macscrpt discussion list macscripting@dartmouth.edu** is a great place for AppleScript discussion. "There are lots of experts there, and some fairly heady topics," says AppleScript veteran Geoff Duncan. Subscribe by sending a message to listserv@dartmouth.edu with "subscribe macscrpt" as the body of the message.
- **AppleScript Sourcebook**
www.AppleScriptSourcebook.com/
- **Main Event** This is the virtual home of Cal Simone, one of AppleScript's foremost advocates and developers. Main Event is also the producer of Scripter, the high-powered AppleScript utility, and PhotoScript, the Photoshop scripter.
www.mainevent.com
- **AppleScript Library** Contains a collection of scripts. Tell Eudora Light or Outlook Express to collect your e-mail, clear Netscape Navigator's cache, and change file types.
www.vallejonet.net/Macintosh4ever/AppleScript/
- **TidBITs library** Nuke browser cookies, generate file names for PC users (eight characters + three-character suffix), change a file's type and creator codes, run mail merges from a FileMaker database (to people who asked you for e-mail!), check your e-mail at 7 a.m. so it's ready when you sit down, and nuke V-cards and other inane attachments (http://db.tidbits.com/getbits.acgi?tlkmsg=3503 for an example).

No Mac Is An Island.

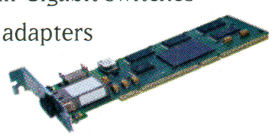
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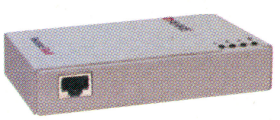


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By Jeff Battersby

Keys to the Kingdom

QuicKeys vs. KeyQuencer

If you haven't been introduced to the joys of macros you don't know what you're missing, especially if you find yourself completing repetitive tasks on a regular basis. Macro programs are designed to take a collection of steps and assign them to a single mouse-click or a combination of keystrokes.

QuicKeys and KeyQuencer are both programs that promise to take the repetition out your everyday computer use. Both have been updated to work with OS 8.6 and have added several new features in their latest releases.

QuicKeys 4.0

QuicKeys has been around for a longer time — nearly as long as the Mac itself — and is by far the more refined. Version 4.0 includes many new features and is guaranteed to be a pleasure for anyone who has used the program in the past. While the interface hasn't changed much, a new Setup Assistant and changes to the toolbars are guaranteed to please.

The Setup Assistant quickly walks you through the task of creating simple macros, so it's no longer a requirement to wade your way through the QuicKeys editor. Like the assistants you're used to using in AppleWorks and most Microsoft products, the QuicKeys Setup Assistant deftly walks you around a series of potential minefields and deposits you safely at the creation of your first macro. Mind you, these are simple macros — open a program; type a signature line at the bottom of an e-mail or an address line at the top of a letter — but they will immediately begin saving you time.

The QuicKeys toolbars have been changed significantly. Buttons can now include drop-down menus and you can drag-and-drop applications, files, folders, and even text to an existing toolbar to create an instant macro. You can also Control-click on any open portion of a toolbar and a contextual menu will appear that allows you to immediately change the attributes of the toolbar.

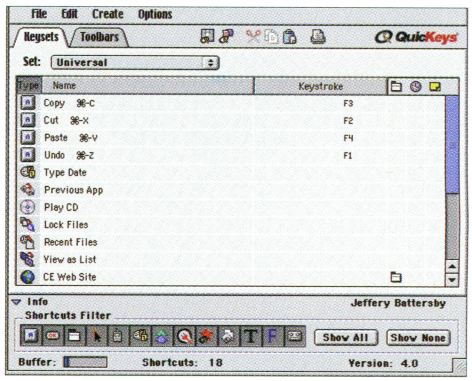
As has always been the case, QuicKeys lets you create macros that are universally accessible from any program, or create those that will only work within a specific program. Both of these options provide an amazing degree of versatility.

While the program goes to great lengths to insulate you from the vagaries of programming, that same insulation can sometimes get in the way. While using the program I often wished that I could have more control over the predefined set of shortcuts.

KeyQuencer 2.5.5

Austerity is the name of the game for KeyQuencer, but don't let that turn you off. While this program lacks the refined finish that defines QuicKeys, it packs a powerful programming punch.

The KeyQuencer editor, KeyQuencer's macro creation environment, is made up of three windows. The main window displays a list of the currently available macros and their related collection of key combinations. This window is also where you edit your macros. The Commands window consists of two parts: an upper portion that contains every available KeyQuencer command and a bottom that displays the parameters available for the currently selected command. The third window — Command Help — displays detailed information about the currently selected command, including examples.



QuicKeys puts many actions into a single button.

Unfortunately, when I stated earlier that KeyQuencer displayed a "collection" of keyboard commands, I wasn't

kidding. Unlike QuicKeys, all of KeyQuencer's macros are universal. Which means that, if you're planning on using key combinations to launch macros, every single one of them must be unique. This leads to such awkward combinations as, "command-shift-option-control-delete" — not exactly the essence of keyboarding finesse. Also, KeyQuencer provides no means of recording your strokes, so every macro you create, you've got to code by hand.

Unlike QuicKeys, you can't create buttons to launch KeyQuencer macros. KeyQuencer does include a program called KeyQuencer Launcher that lets you double-click and launch any of your currently available macros. As an alternative shortcut option, any macro can be saved as a standalone applet, which you can just start up with two clicks, just like any other application.

While some of KeyQuencer's limitations are glaringly obvious, it still remains an amazingly versatile program, especially for the price. KeyQuencer's abundance of available commands combined with its programming-like environment result in a nearly limitless number of macro possibilities — assuming, of course, that you have enough fingers to do the job.

Putting the Programs to the Test

It's one thing to use a macro program to apply a few keystrokes, open up an application or two, or type a little text for a review, but it's quite another thing to put a macro program through a real-world test. Fortunately I've had a bugger of a little multi-step problem that I've wanted to resolve for some time now.

When I take screen shots for magazine articles, I like to leave a clean desktop in the background. To do this I use the MacOS's Show/Hide Desktop option that is in the Control Panel's General Controls. Here's the process that I usually have to follow:

1. Open the Apple Menu
2. Select the Control Panels folder
3. Select the General Controls
4. Wait for the panel to open
5. Un-check the "Show Desktop when in background" checkbox
6. Close the Control Panel
7. Switch back to the application that I was using

Once the screen shot is complete, I repeat the process, checking "Show Desktop,' so that I have easy access to my desktop again.

Both programs required about half an hour to create my desired macro. Frankly, most of that time was spent digging around the manual to learn which commands I needed to use and how — a problem that would be alleviated if I used the program every day.

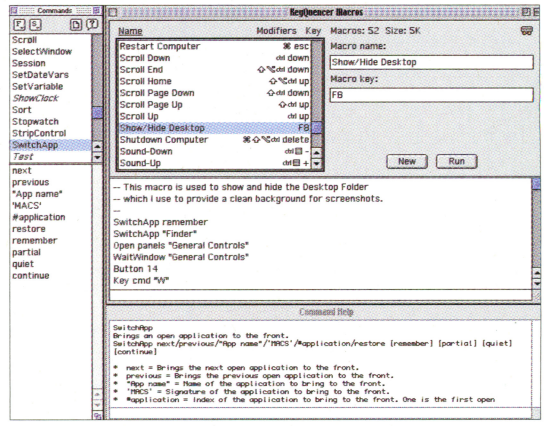
The majority of the macro was pretty straightforward: I simply chose the appropriate commands to switch to the Finder, open the Control Panel's General Controls, close the window and switch back to my original application. Both programs required me to add a "Wait" statement to be certain that the General Controls window was frontmost before putting a check in the checkbox. But this is where my difficulties arose: when it was time to place or remove the check from the "Show Desktop when in background" checkbox.

QuicKeys was surprisingly frustrating when it came to this step. The most obvious option, it seemed, was the "Button" command. But using this command always resulted in an error. After some trial and error (and a recorded macro), I discovered that what I needed to use was the "Click" command — a command I'd tried to use earlier, but for which I had mistakenly selected the wrong option.

The way KeyQuencer resolved the problem was elegantly simple. KeyQuencer has a macro step called "ButtonList," which displays the index for each button in the front-most window. (The index is a unique number that's associated with each button in a given window.) Once I knew the index number for the "Show Desktop" checkbox, all I had to do was use the "Button" command along with the index number.

Using both of these programs I was able to cut the process down from seven steps to one key. But without question, the winner of the real-world test was KeyQuencer.

The Final Decision While KeyQuencer wins out in the real-world test, it lacks everything else that makes a macro program truly useful: single-click buttons, application-specific macros, and a more-refined user interface. QuicKeys's one shortcoming in the real-world test could likely be overcome once you've used the program for awhile. The overall winner: QuicKeys. MH



KeyQuencer automates a wide variety of commands

rating

QuicKeys
$100, CE Software
800-523-7638
www.quickeys.com
PowerPC Required

Excellent design, versatile buttons, universal and application-specific macros

Macro editor is sometimes too confining

rating

KeyQuencer
$50, Binary Software
800-824-6279
www.binarysoft.com

Wide variety of commands allows a great deal of macro creation freedom, inexpensive

Can only create universal macros, no way to create button bars

Ricochet SX Modem and Internet Service

Picture this: You're sitting out in the park with your PowerBook, but you're also surfing the Web and checking e-mail. It's likely to be a common scenario in the future, as wireless technology becomes more prevalent, but way ahead of the wireless curve is Metricom's modem and service, a.k.a. Ricochet.



The hardware component is the Ricochet SX modem — a thin, flat device that you Velcro onto your Mac and attach to your serial port — at press time, there is no support for USB. It's a breeze to install, and once you do, you'll be on the Net in seconds. Indicator lights and sounds provide good feedback, but if you want, you can opt to run the modem in silent mode. Once up, connections are quite stable.

The Ricochet service starts at $30 per month. Along with unlimited Internet access and an e-mail address, this also includes 10MB of storage space for e-mail. This does not include Web page space.

Currently, the Ricochet network supports speeds of up to 28.8Kbps, which is not stellar in this world of 56K modems. But around June of next year, Ricochet will offer a new network that is already showing substantial performance increases in Beta tests. But check this out: When this new network rolls out, Metricom will release a "next generation" USB modem that will allow you to get speeds of up to 128Kbps on the new network. In terms of wireless transfer, this is astounding — after all, this is the speed of DSL, which requires its own special wiring.

The biggest downside to Ricochet is that currently, it's only available in San Francisco, Seattle, and Washington, D.C. But Metricom, fueled by some substantial investments, plans to provide coverage to 12 cities by the middle of next year and promises to provide nationwide coverage by the middle of 2001.

The Final Decision If you live in the San Francisco Bay Area, Seattle, or Washington, D.C. and you want to connect to the Net without being tethered by wires, then Ricochet is the way to go — the flexibility it affords is well worth the expense and current speeds, which will soon increase. If you don't live in these areas, keep your eye on Metricom — it'll soon come to your town.

— David Weiss

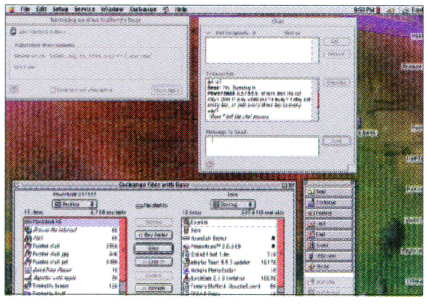
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$299, plus $30 per month service charge; Metricom
800-469-4735
www.metricom.com

👍 **Stable, wireless Internet connections; sleek, lightweight modem provides good feedback**

👎 **A bit slow, limited coverage areas, no USB support**

Timbuktu Pro 5.0



When a Mac user in need pleads, "help!" miles away I say, "Let me take a look." I start up Netopia's Timbuktu Pro 5.0 to control the remote computer, then start digging around in its System Folder.

Timbuktu has a plethora of features: remote control of another computer, file exchange, text and voice chat, alerts when a buddy logs on, Local Area Network (LAN) or modem-to-modem connectivity and it's cross-platform — a Mac can control a Windows machine, and vice versa.

In the past, Timbuktu required you to know a user's Internet Protocol (IP) number to connect; that made connecting difficult, because most ISPs assign you a new IP address every time you dial them up. But with the new version, you can just plug in a user's e-mail address: Netopia maintains a server that matches up IP numbers with e-mail addresses and forwards the number on. It makes connecting much easier, but TB2 still doesn't allow you to display a list of buddies who are also online. However, its chatting is better than with another Internet chatting facility called ICQ ("I seek you," get it?), because Timbuktu tells you when the others are typing and when they're receiving your messages.

Netopia now offers a lower-cost, dumbed-down version of Timbuktu called HouseCall Patient. You can use the free HouseCall Doctor (or TB2) to control, exchange files with, chat with text or speach to a Patient user. You can switch back and forth between a modem connection between the Doctor and Patient computers and a phone conversation between the people, but coordinating when to hang up the phone and hit a couple of buttons is a bit difficult. It's a great way to support multiple computers and save money, though.

Netopia says the new version is 200% faster than the old version, but that's difficult to measure. Dial-up connections seem peppier than before, and LAN connections are as good as ever.

The Final Decision Timbuktu Pro 5.0's newfound ability to easily locate others on the Internet makes it useful for a much wider range of computer users. It greatly improves an already excellent, quite nifty product.

— Alan Stafford

rating 🍎🍎🍎🍎½

$90 (single), $140 (two-pack), $30 (single Patient), Netopia
510-814-5100
www.netopia.com
PowerPC Required

👍 **Much easier connections, low-cost HouseCall option**

👎 **No buddy list**

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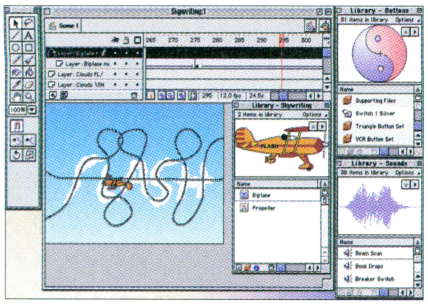
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Other Foreign add $20.00

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iMac Buyer's Guide™
703 Market Street, Suite 535
San Francisco, CA 94103

Flash 4.0



Disney, PBS's Arthur, CNN, and IBM. You may have been to any number of these sites, but do you know what you've seen when you've visited them? Macromedia Flash. Version 4 is the latest iteration of this Web content-creation tool. Macromedia has significantly enhanced Flash by adding several new features: most for professional Web designers and one that will quickly help novices get up to speed.

The Flash work environment consists of a "stage," on which you create your Flash movie. It's surrounded by extensive drawing tools; a timeline for your movie clips; and several libraries of sounds, "symbols" (reusable graphic objects), buttons, and other movies. If that sounds extraordinarily run-of-the-mill for content-creation tools, don't be fooled; what you can do with Flash goes far beyond the average. Without getting too technical, Flash uses vector graphics (read: very small file sizes) along with incredible streaming capabilities that allow you to create fast-moving, movie-like visual images with high-quality stereo sound, all of which can include amazing levels of interactivity. In this regard, Flash flat-out *rocks*.

Among Flash 4's new features are Smart Path Guide Layers and the integration of MP3 sound files. Using Smart Path Guides, you can draw an animation path, attach an object to the beginning and end of the path, and then define the number of frames that the animation should run. The object will then follow the path, from beginning to end, without requiring you to do any other manipulation.

Flash's only downside is also its great strength: the program is incredibly complex. Macromedia provides excellent learning tools, several of which are built right into the program, but don't expect to pick this program up in just a day or two. Also, Flash-enabled Websites require a Flash plug-in, which can sometimes be a Website turn-off.

The Final Decision Macromedia Flash is an incredible tool with which you can create amazing Websites — sites that you have to see to believe. Frankly, there's not another program on the planet that can hold a candle to Flash.

— Jeff Battersby

rating 🍎🍎🍎🍎

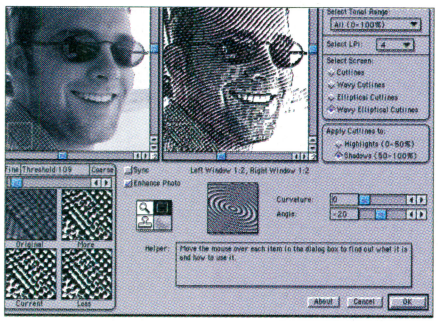
$299, Macromedia
800-475-1774
www.macromedia.com
PowerPC Required

👍 **Creates amazing, high-quality Web "movies" that require relatively minimal bandwidth**

👎 **Plug-in required for viewing sites, bit of a steep learning curve.**

Cutline

Andromeda Software's Cutline is a new filter that allows you to transform your graphics into cross-hatched illustrations. The filter creates stunning, high-contrast images that look great in newsletters or as logos.



Cutline has very specific requirements, though. It's designed for use with high-resolution images; it won't function well unless the image is 300 dots-per-inch or greater. It's also intended for grayscale images, although it can be applied to color images (with nauseating results). It's puzzling that the filter doesn't offer an option to automatically convert your color images to grayscale. If you want to create a black and white cross-hatched illustration — the principal purpose of the product — you have to convert the image to grayscale yourself before you apply the filter.

One of Cutline's biggest drawbacks is its inability to automatically detect proper contrast. The documentation showcases several attractive high contrast images: Dark areas are solid black and white areas are clean and bright. I expected to create similar images with, at the very least, some minor tweaking. Unfortunately, my first few attempts resulted in complete failure. The filter applied a series of lines through the lighter areas of the image and, worse yet, throughout the image's white background. Eventually, I found that I could lighten the white areas to eliminate most of the misplaced lines by clicking "Less" in threshold control. It's a delicate balancing act, however. Lighten the image too much, and white noise begins to appear in areas that should remain solid black. Adjusting the threshold is still no guarantee artifacts won't appear in the image's background. I found I had to place the illustration in a transparent layer so the filter was not applied to the solid white background.

The Final Decision It takes a lot of tweaking to get acceptable images from Cutline. The results of your efforts are often very striking, however. If you're comfortable with a little trial and error, Cutline will add a new dimension to your illustrations.

— Chris McVeigh

rating 🍎🍎🍎

$69, Andromeda Software
805-379-4109
www.andromeda.com

👍 **Creates nifty black-and-white crosshatched images**

👎 **Doesn't work well with low-resolution images, requires a lot of tweaking to get an acceptable final image**



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Whether you're launching a web site, editing the family photos or animating greetings to your friends, Pablo-Internet Edition takes you to a graphic realm you just can't visit with a mouse — with twice the drawing surface for the price and a pressure-sensitive pen that's as intuitive as the kind you use on paper.



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SuperDisk "2X" Drive

Even though floppies are on the way out, they're not gone yet — you may have a shoebox of them somewhere, and many software drivers still come on little 1.4MB disks. A Imation USB SuperDisk drive can not only read floppies (except old 800K floppies), but they can also read 120MB SuperDisks. We tested this drive in January, but the new version claims to be twice as fast, so we gave it another try.



The new drive is "ice" colored and if you order five or more SuperDisks from Imation, you can also festoon your drive with a colored front piece to match the color of your iMac.

Imation's previous SuperDisk Drive was faster at reading and writing to floppy disks than the other USB floppy drives on the market, and this new drive comes though with its promise of being about two times faster than its predecessor. Copying files from the hard disk of a blue-and-white G3 to a floppy disk on the previous SuperDisk drive ("downstream"), I found an average speed of 670 kilobytes per minute. The new one moved the files at an average speed of 1.4MB per minute. Going the other direction, or from the floppy disk to the hard drive ("upstream"), the new drive copied files at about 4.5MB per minute, compared to the previous drive, which copied 2.2MB per minute.

SuperDisk performance was much faster. Downstream, I saw an average of 8MB per minute, and going the other way, a blazing 18MB per minute.

The new drive now comes with Retrospect Express, which is an extremely easy-to-use, full-featured program for managing your backups.

The only downside to the new drive is that Imation has added a large square power brick. That's not such a big deal, but if you carry the drive around, which you'll need to do if your friends don't have a SuperDisk drive, you'll notice the extra weight and bulk.

The Final Decision Imation's new SuperDisk drive is an excellent solution for backup, data transfer, and reading floppies. It's fast, easy to use, and comes with top-notch backup software.

— David Weiss

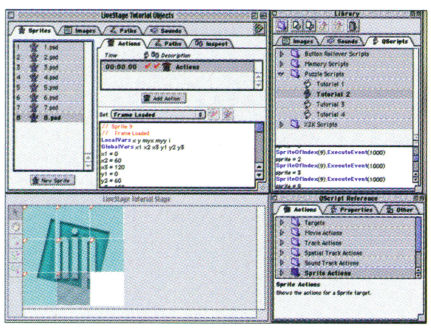
rating 4½

$169, Imation
888-466-3456
www.imation.com
USB Required

Fast, easy to set up, comes with Retrospect Express, looks cool

Has large power brick, won't read old 800K floppies

LiveStage



Once, QuickTime was simply a media player — a quick way to view a movie or listen to a little music. Now, QuickTime is a multimedia machine that can used to create interactive games and applications for the Web, Windows, or the Mac. Problem is, discovering how to create multimedia with QuickTime on your own might take up a large portion of your short lifetime. Enter Totally Hip's LiveStage. LiveStage is a QuickTime development tool that allows you to create almost anything you can imagine.

LiveStage derives its creative power from an integrated programming language called QScript. Without getting technical, QScript, a derivative of the BASIC programming language, lets you integrate vector graphics, bitmap images, and sounds to create an entirely interactive QuickTime environment. In short, QScript lets you take complete control over every object that appears in a QuickTime movie.

LiveStage's workspace consists of a Stage, which is the area where you create your animations; an Objects window, which contains the sprites, images, paths, and sounds that are being used in your production; a QScript Reference window, which contains reusable portions of scripts, and a Library that is used to store images, sounds, and your own scripts. Starting your first project is simple enough. You just select "New" from the File menu, define the size of your "Stage," and then drag your first Object from the Library onto the stage. Each new object you add becomes a Sprite that can be manipulated using QScript.

A word of warning here: At its heart, LiveStage is essentially a programming environment, which means you'll need to master your IFs, ANDs, and Ors — as well as a few other keywords — if you plan on doing anything significant with the program. Simply placing your "actors" on the stage isn't going to do a bit of good. You'll need to program if you plan on making the "actors" perform.

The Final Decision Powerful, capable, and slick, LiveStage takes QuickTime beyond simple streaming audio and video, making it an excellent, cross-platform, multimedia master.

— Jeff Battersby

rating 4

$300, Totally Hip Software
888-884-3447
www.totallyhip.com
PowerPC Required

Provides unprecedented access to QuickTime features. Create interactive media for both Mac and Windows.

Programming is absolutely necessary to create a quality product.

500F 15-Inch LCD Display

Thin is in. But supplies are limited, so if you want a slender LCD (that's liquid crystal display, or flat panel) monitor to grace your desktop, be prepared to shell out some cash. Case in point: Hansol's new 15-inch 500F. At $870, it costs more than a lot of folks will want to spend, but it's actually on the low end - consider that Apple's 15-inch flat panel costs about $1,300. It's supply and demand, you know - the components to build these displays are not cheap.



Hansol's monitor is very sharp indeed, and is readable from many angles without noticeable discoloration or distortion, as we've seen with other models. Viewed straight-on as intended, the display is excellent, with uniform brightness and sharp text and colors. Only if you lean forward and look very closely will you see any prounounced blockiness, and really, you shouldn't be doing that anyway. The built-in controls are exceptionally easy to use - with some LCD monitors the hardest part is adjusting them so that waviness and blockiness are minimized. Thankfully, Hansol's unit has an "auto-adjust" control that makes quick work of this. I found that using the manual settings, I was able to capture a bit more brightness than with the auto-adjust, but otherwise manual tweaking wasn't needed. A handy "back" button makes navigating or escaping the pop-up menu quite easy. And the controls work in English, French, Italian, German or Spanish!

The Final Decision Hansol's done an excellent job with the 500F. Though the price is steep, it's in line for monitors of this ilk. The output is good enough to compete with standard monitors, and the unit's small size and weight make it a good choice for workplaces where space is at a premium. Which is most workplaces. Add to this some simple, effective controls and a very useful auto-adjust function, and you've got a winning combination.

— John Poultney

rating 5 apples

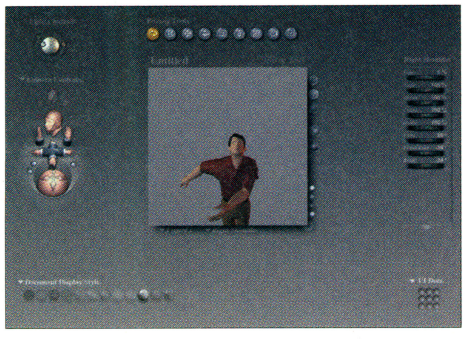
$870, Hansol Multitech
888-426-7651
www.hansol-us.com

Great color, text and brightness response. Intuitive controls and automated setup make calibration easy. Light and small.

None.

Poser 4

Are you an artist but you can't draw a stick figure? Or a cartoonist in dire need of a model? Poser 4 eases you into the world of 3D and gives you a chance to play Creator. 3D rendering tools such as KPT and Bryce have become an industry standard to computer novices and experienced animators alike. Metacreations keeps the tradition alive by bringing you Poser. And along with new features, Poser 4 has a new animation palette that not only surpasses the competition but does it with style and poise.



Maintaining its original user interface, the program allows you to pose your models with ease. Poser 4 allows you use a number of figures in unlimited positions. Make them dance the tango, run against the wind, or breathe a deep sigh of relief. Now you can choose from numerous male and female characters from infant to superhero. Pose your character twice, and Poser fills in all of the in-between movement for you. Welcome to animation!

Even speaking comes naturally to your characters, because Poser 4 allows you to work with phonic facial poses. This gives your models lifelike movement that adds spice to your animations. More animals have been added, including snakes, frogs, wolves, and dolphins. Poser 4 includes standard poses for especially realistic animal movements. Metacreations has added a virtual closet full of clothes that allows you to change the look and feel of your animations — you not only pick what they wear, but you can adjust the color of each garment as well! The only difficulty in working with Poser's clothes is that you have to do a little manual shifting and sizing before you get that oh-so-real fit. Remember Ken, and his plastic, fake-looking hair? Well you'll be able to do better than that — Poser 4 has gifted your models with posable hair, so you can get windblown effects.

The Final Decision MetaCreations has brought the power of 3D animation to those who can't use a pencil. Despite the trickiness of some features, Poser still stands strong in its user friendliness and power.

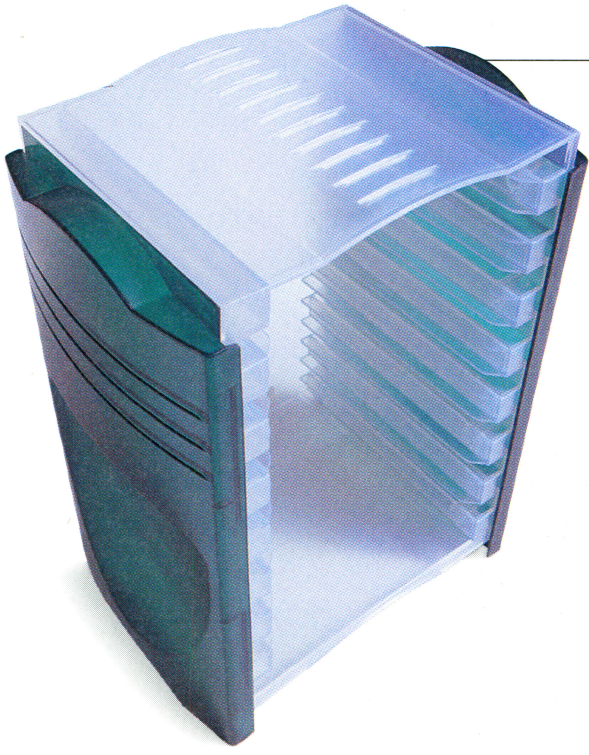
— Joey French

rating 4 apples

$149, MetaCreations
800-846-0111
www.metacreations.com
PowerPC Required

User Friendly, very lifelike, added features

Some extra "manual" labor required in some areas; more-advanced tools are a bit complicated to understand



ALLSOP StaggerStack.

Unit holds 16 CDs with extra storage on top. Staggered design provides easy CD identification and removal. 60299



EPSON Stylus 7401 Color Printer.

1440 x 720 DPI of photo quality color. Compatible with Windows '98, '95 3.1x, NT, Macintosh, USB. 4-color Micro Piezo Inkjet. Adobe PhotoDeluxe, Broderbund, etc. 6PPM black, 5PPM color. 1-year overnight exchange warranty, 86439

IMATION USB SuperDisk Drive.

120MB capacity. USB interface. Uses 1.44 3½" floppies and 120MB SuperDisk. iMac compatible. 49319



NEWER USB uDrive.

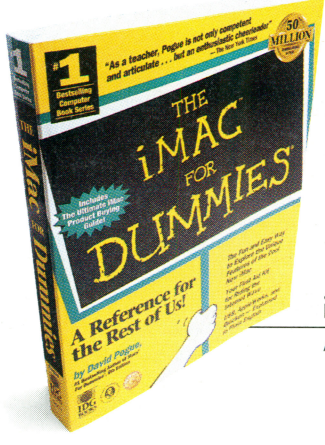
1.4MB floppy drive. USB interface, iMac compatible. Styled to match iMac. Stackable with other Newer uLine peripherals. 49709



AGFA SnapScan USB Color Scanner.

600 x 1200 PPI optical, 36 bit. 9600 x 9600 DPI interpolated. 8½" x 11⅞" scanning. USB interface, iMac and Windows '98 compatible. Agfa Scanwise, Corel Print House Magic. Caere's Omnipage LE 5.0 for OCR. 46149





iMac for Dummies.

A reference for the rest of us. 63018

Your girlfriend's not the only one who can accessorize at Sears.



ALLSOP CD Transit.
Stores a combination of 10 CDs, DVDs or CD-ROMs. 60114

NEWER USB uHub.
7 ports. Cross-platform capability. Styled to match iMac. Stackable with other Newer uLine peripherals. 8 indicator lights, AC adapter. 49719

IOMEGA USB Zip Drive.
100MB capacity. USB interface. Windows and iMac compatible. 49229

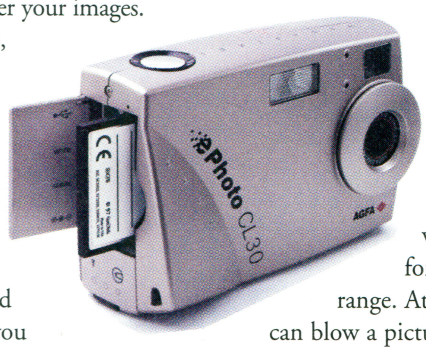
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SEARS

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Prices may vary in Alaska, Hawaii and Puerto Rico.

CL-30 ePhoto Digital Camera

USB is a great boon for digital cameras, since it enables you to easily plug in a camera to transfer your images. Agfa's CL-30 ePhoto, however, has support for both serial and USB, so it will work with older Macs as well.



A clear plastic cover protects the CL-30's LCD (liquid crystal display), so you won't have to worry about smudging or damaging it. The camera comes with a 4MB compact flash card, which can store 36 low-resolution photos or 12 high-resolution ones. And Agfa threw in a case, which is a nice touch.

Most of the camera's functions are accessible with a nifty thumbwheel that you can both turn to toggle through options and click on to make a selection. Most other digital cameras are downright baffling in comparison. The downloading software for this camera is also very easy to use, and it stores your pictures in folders on your hard disk organized by date.

The CL-30 can capture images with resolutions of up to 1,152 x 864 pixels, which is about average for a camera in this range. At that resolution, you can blow a picture up to 16" x 12" before it will begin to look pixelly.

Unfortunately, the camera's LCD is rather dark and shows poor contrast — at times I found it so difficult to see that I used the optical viewfinder to frame photos. And when you move the camera around to frame your shots, the LCD shows sluggish trails and distracting bluish and reddish colors. Also, if you plug the camera into a USB port before you turn the camera on, you'll get an erroneous message that the required software is not loaded; you'll know it's erroneous because if you then unplug the camera and plug it back in again, everything will work fine.

The Final Decision Despite its poor LCD and finicky USB connection, the CL-30 is an excellent budget-priced camera. It provides high-resolution photos, it has good software for downloading and storing your photos, and, with its intuitive camera controls, it's extremely easy to use.

— David Weiss

rating 3 apples

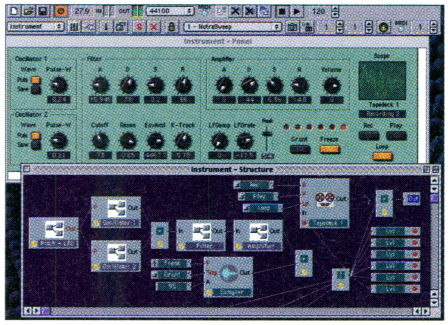
$399, Agfa
800-976-2432

USB plus serial support, good software, excellent camera controls, comes with case, LCD has protective cover

Dark LCD, Gives erroneous USB messages

Reaktor 2.0.3

"How do you want to sound today?" playfully begins Reaktor's manual. If you enjoy creating radical audio textures, playing rich-sounding analog synthesizers, or even solving logic puzzles, it's a question you'll have a lot of fun answering.



Reaktor is a powerful software synthesizer. It combines Native Instruments' Generator (an "analog" synthesis program) and Transformator (a sampler), which each retail for $298. Reaktor comes with hundreds of presets, each a complete synthesizer in itself.

To create new synthesizers, you string together icons with your mouse. Each one represents signal-producing devices, and there are nearly 200 to choose from. Along with standard synth components, such as oscillators and filters (even knobs!), Reaktor offers such esoteric modules as Grain Delay, which changes the duration of a sample without changing its pitch. A Tape Recorder module lets you record the program's output as an audio file.

Once the icons are connected in a complete circuit, simulated LEDs light up, and you can trigger sound at different pitches by typing. It's much more satisfying to play Reaktor via MIDI, though. For this, you'll need the OMS extension (free from www.opcode.com), a MIDI keyboard, and a MIDI interface (about $35). With a MIDI "knob box," such as Native Instruments' 4Control ($179), you can use actual knobs to control the onscreen ones.

After some OMS fiddling, I was also able to run Reaktor from my sequencer program, where it showed up just like a hardware MIDI destination. But download the demo first to see how Reaktor performs on your Mac. It frequently slowed my 266 MHz G3 to a crawl. It also crashed a lot.

The Final Decision As you might guess from the Microsoftian opening line, Reaktor was originally a Windows program. And unfortunately, many basic features — such as online help and MIDI program changes — don't yet work on the Mac version. Native Instruments says that nearly all of the 20 bugs I found will be fixed in a free update, and I can't wait, because this program has a lot of potential.

— David Battino

rating 2 apples

$469, Native Instruments
800-665-0030
www.native-instruments.com
PowerPC required

Mind-boggling sonic potential, flexible graphic interface, extensive MIDI control

Many functions don't work, requires substantial electronic music knowledge and a powerful computer

Image Power

Zooming in on Photoshop 5.5

By Jackie Dove

Veteran pixel pushers know that Photoshop rules. It's long been the standard for manipulating digital images, but the new version lets you accomplish dazzling new feats, especially if you are creating art for Websites.

Though Photoshop has always been a boon to desktop publishing, the release of version 5.5 signals Adobe's complete commitment to Web design. The most obvious — but not the only — example of this is the inclusion of ImageReady, which was formerly a standalone Web-graphics application. You can use the new version to create Web animations and other special effects.

Oodles of Goodies

Version 5.5 comes with a slew of new tools. The Background Erase tool is a very handy and convenient way to get rid of backgrounds in both your print and Web images. Using a large brush with a crosshair in the center, you can erase any background without touching the image, as long as the crosshair does not touch that image. A new Extract command allows you to remove parts of an image from the backgrounds. The new version also includes an Art History brush, which creates special effects — such as a watercolor look — when you pass the brush over your image.

Creating Web-Ready Images

If you want to place your images online, you need to "optimize" them — that is, you need to make sure the file will download quickly and display accurately in a Web browser. The new version adds a Save for Web menu command exactly for this purpose. You can even view your images at varying qualities with up to four choices viewable onscreen simultaneously. You can view your images against their download times; pick the compression scheme that is right for your Website; and choose among GIF, JPEG, and PNG formats. You can have your image appear in a transparent background, so there's no white box around it when it appears on the Web.



Jump to It!

With the new version, both Adobe's Photoshop and ImageReady share common commands, tools, palettes, and keyboard shortcuts, and a Jump To feature lets you toggle back and forth seamlessly between the two applications.

With ImageReady, you can create JavaScript rollovers, in which the image bulges, glows, or moves when you pass your cursor over it. Image slicing, normally an arduous process of taking an individual image and cutting it up into multiple hot links, is made quite easy with ImageReady. HTML experts will certainly not miss having to perform this advanced task. ImageReady also lets you animate your images and handles the code for image maps, which turn your images into hotlinks. One really neat part of ImageReady is that after you are finished optimizing your images, you can actually see what they look like in your browser.

Take Your Time

We do not pretend that Photoshop is a snap to catch on to, however, and new users should take comfort in the fact that even veterans will have to practice a bit in order to master its new strokes. The good part is that once you have some basic moves down, it is easy and fun to improvise and experiment to get the effects you want. However, we found that following the guidebook and learning how to get started with the Tour was the best way to learn the program.

The Final Decision Whether you already use Photoshop, or are new to the program and wish to create graphics for both print and Website designs, we highly recommend Photoshop 5.5 as a powerful and versatile tool. Although it's expensive, registered Photoshop 5.0 and ImageReady 1.0 users can upgrade for $129 (after rebate) until May 2000. All other registered users of previous versions of Adobe Photoshop can upgrade for $199. MH

rating 🍎🍎🍎🍎

Photoshop 5.5
$609, Adobe Systems
800-833-6687
www.adobe.com
PowerPC Required

👍 **Complete image capabilities for Web site design, enhanced print capabilities, automates painstaking tasks**

👎 **Complex with a high learning curve, expensive for new users**

By Jackie Dove

There's No Place Like Home

A Domain Radiates Status and Respectability. But Is It Real?

When someone asks for your address, what would you rather tell them: that you live on chic 5th Avenue or in the Bowery? Well, if you're like most people, 5th Avenue probably would be your preference, even if you do live in the Bowery.

In real space, this may present a problem if someone wants to visit you, but in cyberspace, it is quite possible to live (have your Website reside) in one place and have your real address (your Universal Resource Locator or URL, that is) in another.

You can either register for a genuine domain name (see sidebar), or you can have one of the many URL-redirection services online give you a URL that is more domain-like without the expense of a genuine domain.

Why worry about a domain name? Like many people, you may have just gotten your computer and signed up with an ISP (Internet Service Provider) for Internet access. As you read through the list of services, you discover that your ISP actually offers you a small amount of "free" space on its server (the computer it uses to link to the Internet) for you to post a personal Website. Or, you may have signed up with a Web-hosting service.

Either way, you are assigned a URL, referred to by its initials (also pronounced colloquially as Earl).

A URL from your ISP is generally a long complicated string of letters, numbers, dots, dashes, and slashes that is impossible to pronounce and remember by mere mortals. It will look something like this: www.isp.com/~yourname. Not exactly slick. If you launch a Website for your business, or even a family Website with photos of the kids, you may want a better URL — something more memorable, something that's, well, more you.



Impressive Address

"If you have a Geocities site, people don't want it for that long, because it's not professional," says Herb McDonald, operations manager of SuiteNet, a URL-redirection company in Margate, Florida. SuiteNet offers a range of services, including URL and e-mail redirection, domain name registration, and Web hosting for a variety of fees to transform your Web address from www.isp.com/~yourname to www.yourbusiness.suite.net or a real domain name.

WebAlias, a URL-redirection firm in Tenefly, New Jersey, offers free virtual-domain names in exchange for a banner ad that pops up once each time a visitor hits your site. According to James Hagani, president of WebAlias, "There are two types of redirection services. There are those that seek to make your URL as short as possible ... others want to give you a more memorable domain."

Catering to both groups, WebAlias can give you a URL such as fly.to/Jackie (there's definitely a ring to that!), or you can choose from a number of specific domain names that work well with your subject as well as search engines, for example, sportsreport.com.

"These names give you the benefit of a real domain name — the stature and the impressiveness of established quality names." Hagani says.

What's a Redirect?

How does a URL-redirection service change your obscure Web address into something memorable and send your visitor to a different URL than the one requested? It goes something like this, and it can vary according to servers and providers: When the server receives a request for a URL that has been redirected, it sends an error code, along with the

new location, back to the computer, which then responds with a request for the new URL.

URL redirection is like a telephone forwarding service. Someone types in your fancy address and then gets routed to the Bowery where you really live, except they don't know they're in a different neighborhood unless they study the address window. Some services can even hide the Bowery address in the browser window.

Visitors to your site will likely not notice that any of this has happened — it should take place instantaneously — but they may notice that, at least with some URL-redirection services, the URL in the address window is not the same as the address they typed in.

Fly.to

Call it trendy, call it gimmicky, call it fake, but there's no denying that using country codes, or the top-level domains of various nation states, is the hot new thing for disguising your real Internet address without going to the expense of registering a domain name.

The country codes of places such as Tonga and Niue (both small island nations in the South Pacific) may even come free of charge from some redirection services. So, instead of a URL such as www.isp.com/~yourname, you can have Fly.to/yourname, wherein the .to is Tonga's top-level domain.

What Is a Domain?

Domain names consist of letters and numbers, usually separated by periods, that identify Websites on the Internet. A domain name represents the Internet Protocol (IP) numbers that point a Web browser to a particular address. Type in a domain name in familiar alphanumeric alphabet, and your computer translates it into numbers. Domain names are for people, and IP numbers are for computers, but they both translate into the same thing.

Let's take a typical URL such as http://www.isp.com/~yourname. The http:// is the HyperText Transfer Protocol, a Web-access protocol. The www.isp is the name of the server where your Website is located, also called a second-level domain. The .com is the top-level domain. The /~yourname is the actual folder on the server where your Web pages (HTML documents, image files, sound files, video files, etc.) are located.

Thus, when you use an ISP or Web host, you are posting your pages on their computer, and thus your IP number is actually their IP number. But because your Web pages are stored in their own folder, they can be accessed by typing a slightly different URL than all the server's other users. It's like living in an apartment building: A thousand people can have the same street address, but they live in different apartments. In cyberspace, your "apartment" is generally your user name. The point is that you have no choice of URLs: You must take the URL you are given (even if it is the Bowery), unless you are willing to pay more (rent?) for upgraded services.

At this writing, the top-level domains are: .com, .org, .net, .edu, .gov, and .mil, and two-letter country codes that designate nation states. These will soon be joined by brand new top-level domains: .arts, .firm, .info, .nom, .rec, .shop, and .web.

Run on Names?

Opinions vary as to whether a run on popular .com, .org, and .net top-level domains has resulted in a shortage of good domain names. Domain names are granted on a first-come, first-served basis, according to a huge database called Whois; so it makes sense that as more and more names are snapped up, the available pool of names will shrink. Says Kevin Davis, Domain Master at FirstWorld Communications in Denver, "Domain names are running out. People have to become more inventive. It's not like you can just get anything you want."

Then too, there is the corrupt phenomenon of "cybersquatting," in which Web rustlers anticipate which domain names will be in demand and buy them with the intention of selling them back to individuals and businesses. Sometimes this backfires, however, as malicious cybersquatters can be sued for trademark violations.

A (Domain) Name of Your Own

A company called Network Solutions Inc. (NSI) used to be the only game on the Internet if you wanted to register a domain name, and, as we go to press, NSI is still the dominant player.

But Internet time is faster than a New York City minute, and as you read this, the times are a-changing. Network Solutions, which formerly held an exclusive government contract to award top-level domain names on a first-come, first-served basis through the InterNIC (Internet Network Information Center) registry, must now compete with other companies. The first five companies chosen by the Internet Corporation for Assigned Names and Numbers (ICANN) consist of: America Online; register.com; the Internet Council of Registrars (CORE); France Telecom/Oleane, and Melbourne IT. This business eventually will be open to an unlimited number of companies.

At this writing, a domain name from Network Solutions costs $70 for the first two years, and $35 a year after that. But that is not all. The fee to NSI is in addition to the money you pay to your ISP for both Internet access and hosting your domain. Packages and services vary, but for example, the ISP FirstWorld Communications charges individuals $21.95 a month for unlimited Web access, and then another $30 a year to maintain service on your domain name. If you get a Web-hosting account, add another $10 a month for your Internet connection, and then FirstWorld throws in 50MB of Website space, and three e-mail boxes.

Many ISPs also offer domain name-registration services, for a fee, of course. Prices vary widely, and it's good to shop around. Be sure you understand all the charges involved in a domain name before you commit.

Internet Corporation for Assigned Names and Numbers, www.icann.org
CORE, www.corenic.org

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Ben Turner, vice president of sales and marketing at Network Solutions in Herndon, Virginia, which recently was forced to relinquish control over top-level domain name allocation via its InterNIC registry, says the shortage is in human imagination, not domain names. "We have seen a record growth in .com and .org names. They account for 75% of the market. And .net is an untapped landscape," Turner says, adding that in less than 90 days, Network Solutions registered more than one million .com, .net, and .org domain names. "You are limited only by your creativity. It's like naming a business."

Do They Work?

The question of quality arises in URL redirection. After all, you know your ISP, but what do you really know about a redirection service? Says Gabriel Foux, interface designer at Arrive.com, a Miami, Florida, -based URL redirection service, "A good URL redirection should be hosted in a very good server with a very fast connection." Arrive.com, Foux says, comes armed with "multiple redundant OC3 (optical carrier) fiber-optic connections to the Internet and through a DS3 (digital signal server). The bandwidth of a DS3 connection is 45 mbps, or about 28 times larger than a T1 (1.5 mbps). This connection guarantees that a page will be redirected immediately, with virtually no delay. It is also important to have 24 x 7 x 365 server monitoring ... and generator equipment power backup."

But not all URL-redirection services work transparently. For example, Zooming.to, based in the UK, offers free redirection services, based on advertising. If you use Zooming.to, visitors will get a redirection page, which takes about seven seconds to load — just enough time to read a small amount of text.

SuiteNet's McDonald warns users not to blame a site's slowness to load on the redirection service. He says that the wait is caused by the slow servers that host many of the free Websites. "Our scripts actually make their Websites faster," he says.

Something for Nothing?

Nothing is for nothing, and that is also true of URL-redirection services. The first thing you will run into is the restrictions. Most post explicit warnings against spamming, pornography, and other illegal activities (but you weren't going to do that anyway, were you?). SuiteNet also bills itself as a "Christian-Owned System," which will also refuse to service Websites with "anti-Christian" content.

Then, while some redirection services have elaborate fee structures and service packages, with "free" services, you may have to place banner ads on your site or tolerate pop-up windows and delay pages. But Web-redirection operators say that is a small price to pay compared to getting a real live domain name.

Says WebAlias's Hagani, "Our service is not just a savings of $70 (charged by Network Solutions to register a domain). The price of setting up a domain name on your ISP is not free. It's several hundred dollars a year." And while he acknowledges that, "As the price of domain names goes down, redirection services will be extinct," Hagani warns that even if domain names were free, the setup and administration will never be free.

Not for Everyone

If you are on a budget, you will likely reject the idea of a private domain name. So, it may be worth it to investigate the free URL-redirection services.

Be aware, however, that Net surfers are savvy, and can easily detect when a URL has been outfitted with a cute foreign country code. Also be aware of hidden charges, intrusive banners, and pop-up windows with your "free" service.

Finally, check into companies that advertise free URL-redirection services to make sure they have the connectivity and server power needed to accomplish the job. After all, if their servers blow out or they go out of business, visitors may well say goodbye to your Website. MH

Network Solutions, www.networksolutions.com
SuiteNet, www.suitenet.com
WebAlias, www.webalias.com
Zooming.to, www.zooming.to
Arrive.com, www.arrive.com/Free_Web_Names/
FirstWorld Communications, www.firstworld.com

By Jackie Dove

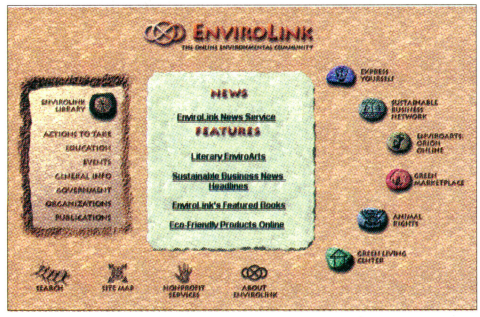
Want to Save the Earth? Go Online

Websites Inspire, Encourage Activism

When the World Wide Web burst into the public consciousness a few short years ago, it occurred to Bookmarks that communicating on the Internet would signal an ecological advance over the tons of paper, faxes, and newsprint wasted each day. This would save trees, fight pollution, and Be a Good Thing.

Well, we see no evidence that the Internet or the Web has cut down on paper use — in fact, quite the opposite, as thousands of tree-consuming books are being published just to tell people like us how to use all this stuff (sigh!).

However, in terms of ecology and environmentalism, never has there been more information and more ways to get your lazy self (we speak for ourselves, of course) active than through the Web. The Web has information that the mainstream press, with its increasingly commercial content, refuses to touch, and the mobilizing effect of information online — including newsgroups, e-mail lists, chat rooms, and other forms of communication — has revolutionized environmental activism.



One pioneer of the genre is EnviroLink, an umbrella Website that hosts more than 500 environmental and animal rights nonprofit Websites, and it is the recognized starting point on the Web for this kind of information. Websites such as the Sustainable Business Network, the Green Marketplace, the Animal Rights Resource Site, and others jump off Envirolink's opening screen, but a library within the site contains the URLs to hundred of green Websites.

"The Internet, if used properly, is an incredible tool for activism on all issues — pro this or anti that. It is a great tool for any issue. It's great to see people doing something. That is what the spirit of the Internet is about," says Pittsburgh, Pennsylvania, designer Josh Knauer, creator of EnviroLink. Knauer's office occupies a 1,200-square-foot space above a storefront in the Squirrel Hill section of Pittsburgh (home to some five species of squirrels). EnviroLink's office is often inhabited by several canine companions and is a mix of technology and nature with computers, plants, and wood interiors.

The EnviroLink Website feels comfortable, warm, and tactile, sporting earthen colors and a natural, eye-soothing palette. The clickable icon stones are ancient symbols. EnviroLink contains a comprehensive listing of environmental activist links that feature local and regional groups working on various issues. EnviroLink also hosts chats, links, libraries, and forums, so people can make contact, interact, and coordinate pro-environmental action. "The Web is a great equalizer," says Knauer. "Small organizations that don't have a big budget can reach people in their communities and beyond. All you need is a professional design that comes from the love of the issue."

EnviroLink, www.envirolink.org

Web Island

Earth Island Institute was founded in 1982, and it has attracted a rather large circle of folks worldwide who get involved in such things as Sea Turtle Restoration, preserving Mangrove forests, and marine mammal concerns about whaling and the tuna industry.



Earth Island Institute posts contact information, including e-mail addresses and sample letters. The site also includes feature stories from the *Earth Island Journal*.

Defending the Earth

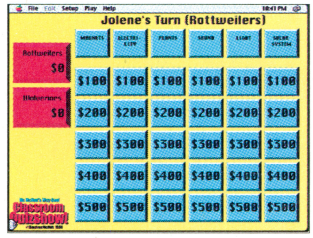
The Environmental Defense Fund is a nonprofit environmental group that concentrates on climate, oceans, human health, and biodiversity. It has a new section called Hog Watch, which gives you the inside story about factory farming.

Luna

What is so special about the Luna Website? Without doubt, it is the charisma of its subject Julia "Butterfly" Hill — the 25-year-old who has braved the elements and official intimidation — who inhabits Luna, the huge, ancient (over 200 feet tall and over 1,000 years old) redwood, which has become the symbol of the old-growth forests. Julia climbed 180 feet to occupy Luna on December 10, 1997 — an act of civil disobedience — to protest the destruction of Headwaters Forest in California and clear cutting in general. Hers is the longest tree-sit in history.

Earth Island Institute, www.earthisland.org
Environmental Defense Fund, www.edf.org
Luna, www.lunatree.org

Some Tough Questions



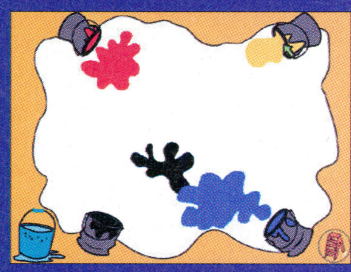
It's becoming harder and harder to find really cool stuff out there; seems like everyone has educational titles these days. That's why we were delighted to see that Lemont Cranston, a high school teacher in Alaska, sent us this little tidbit.

Apparently, a cunning young programmer named Steve McNutt has been cranking out an excellent teaching program that's had more than seven versions. Not only has it been around for awhile, it's said to be an indispensable tool for teachers who find it hard to hold their students' attention. What is this fabulous wonder program, you ask? Why it's **Mr. McNutt's Classroom Quizshow**, a Mac-only quiz show-style game to help teachers turn their classrooms into a Jeopardy-inspired triviathon. The game allows teachers to write their own questions and keep track of numerous competitors right on the desktop of their classroom Mac.
Steve McNutt, www.classroomquizshow.com

This Little Piggy

Learning in Motion announced, Their new line of Piggy games are availible on the Mac. The series, which includes *Piggy in Numberland* and *Piggy's Birthday Present.*were brought over to the Macintosh by a Ukrane based conversion house, interestingly enough. the series features the kantakerous Piggy in some intersting situations and shows off all sorts of bizzare situations. Piggy himself has some odd traits, most notably the ability to fly with his ears whenever he gets stuck in a dead end. The Piggy series of games are availible from the Leaning in motion website.
Learning in Motion, www.learn.motion.com, 800-560-5670

Paint, Three-Year-Olds, and a House



Bad combination, right? Not if the house is on your Mac. ideas that play, (that's intentionally left uncapitalized) is a Canadian educational software house that lives by the Mac platform. Its newest title, **Buddy Brush and the Painted Playhouse,** is aimed at kids ages 18 months to six years of age. Best of all, it'll let your two-year-old run wild without all the mess. Kids can play with color, blobs of goo, and lots of musical elements. Everything makes a sound or plays a tune in this playhouse. The songs from the game are stored as CD audio tracks on the disc, so toddlers can listen to them without the computer. This is the first in a planned series of *Buddy Brush* titles, all of them focusing on play as a learning tool.
ideas that play, www.ideasthatplay.com

Fox. Spy Fox

Humongous Entertainment is gearing up to release its second SPY Fox based game, *SPY Fox 2:Some Assembly Required.* This time around, SPY Fox is rejoined with his old friends Monkey Penny and Quack. Together, they'll fight the evil organization SMELLY (The Society for Meaningless Evil, Larceny, Lying, and Yelling) with the help of all sorts of fun spy gear like the Dehydrated Skis Pill, which, when mixed with water, allows SPY Fox to go shushing down the slopes. The title should be availioble as you read this, and will work on almost any Power PC, so even users with a first generation Power Mac can fight evil alongside the gang. Be careful, though; SMELLY is everywhere *Humongous, www.humongous.com, 800-499-8386*

Disney Draws a Sequel

Fans of Disney's Magic Artist should be pleased to learn that a sequel has been released. This nifty little doodad should be the cat's meow for any budding young artist who enjoys the Disney universe. Kids can paint with standard tools, such as brushes, buckets, pencils, pens, and even an electric toothbrush. An interesting addition to the series will be the new moving stamps — resizable dancing images of everyone from **Mickey to Daisy**. Kids will be able to create their own scenes, complete with swing music and properly attired cartoons. Also in the works on the animation side of things is the new DoodleMorph tool that allows kids to animate their line drawings simply and easily.
Disney, 800-900-9234, www.disneyinteractive.com



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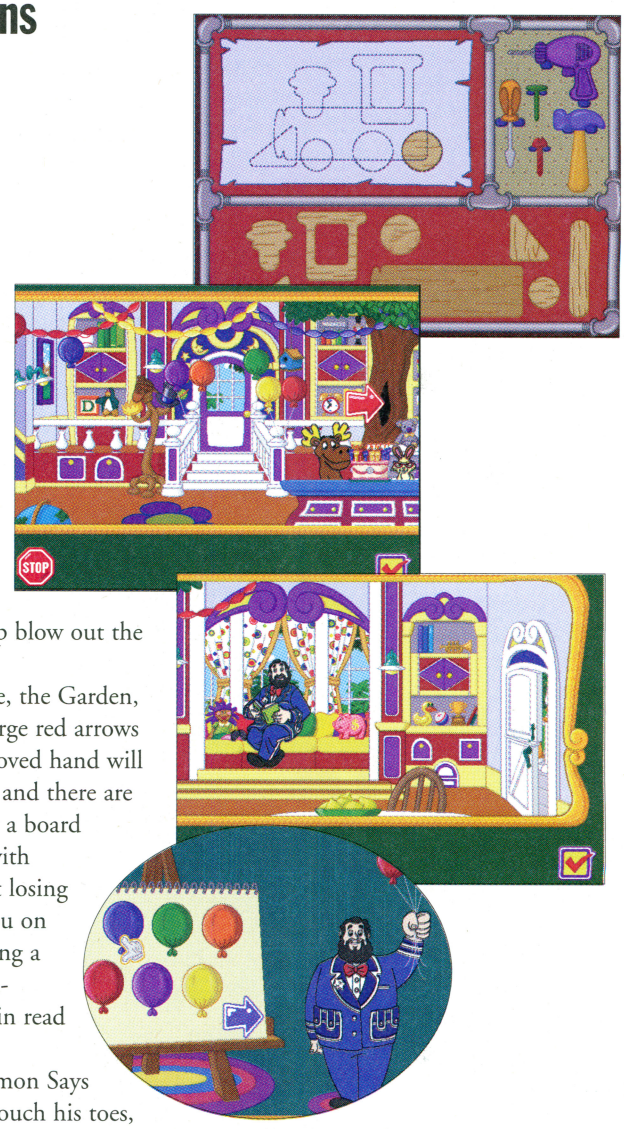
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Captain Kangaroo — Life's First Lessons Adventure #2



$20, Knowledge Adventure
www.knowledgeadventure.com
800-542-4240
Ages 3 to 5

Parents may not recognize the new Captain Kangaroo, since Bob Keeshan and the familiar red jacket have been replaced by a very Pavarotti-esque Captain in a blue jacket, but kids should find him as entertaining and lovable as the original. Based on the new Fox Family Channel television series, this CD-ROM centers around a surprise birthday party in the Treasure House. "There's nothing better than making someone you care about happy," the Captain announces at the start. Children get to choose whether they want to throw a party for Mr. Moose or Bunny Rabbit, and then they play an integral part in party planning as they decorate the Treasure House with balloons and streamers, choose a birthday cake, and help blow out the candles.

There are three areas that children can explore: the Treasure House, the Garden, and Joey's Workshop. Moving around the scenery is made easy by large red arrows that appear when the mouse is moved to the side of the screen. A gloved hand will appear whenever the mouse glides over an area that is interactive — and there are many surprises hidden in the shelves and on the floor. Kids can play a board game, where they take turns going around the board and rhyming with Grandfather Clock. This event helps teach colors, rhyming, and that losing isn't that bad (you still get a prize, and the whole gang still cheers you on for playing). The Captain himself asks the user to assist him in writing a story, which kids can do by clicking images in a "Choose-Your-Own-Adventure" style. After the story is finished, you can have the Captain read it again — this time with the words at the bottom.

Outside in the garden, Mr. Greenjeans plays a polite version of Simon Says called, "Say Please, Please," in which kids make Joey the Kangaroo touch his toes, bend his knees, or wiggle his ears. Mr. Greenjeans always thanks you for playing along, and even when you lose, he admires you for being a good listener. My personal favorite area was definitely Joey's Workshop, where kids build a toy as a birthday present. "The Captain says the best presents are the ones you make yourself," boasts the adorable Kangaroo. Kids learn how to follow directions, identify colors, and develop problem-solving skills as they assemble the toy, and then they can use Joey's tools to drill, screw, and hammer it together. And when it's all finished, they can choose the wrapping paper. When the party's over, the Captain presents the participant with a thank-you card from Bunny Rabbit or Mr. Moose, including a snapshot of the "birthday boy" with his new toy.

As an added bonus, the CD-ROM also includes "Parent Tips," which provides 14 different children's activities, tips for encouraging good behavior, and a reading list for parents.

In addition to teaching colors, numbers, how to follow directions, and computer skills, *Captain Kangaroo: Life's First Lessons Adventure #2* boasts that it also teaches skills to aid in listening, sharing, taking turns, friendship, and self-esteem. I started the game a doubter and finished the party a believer. The Captain says it best at the end: "Be kind to each other. Know that you can be anything you want to be. And remember — you'll always have friends at the Treasure House."

—Thomas Mulhearn

Thinkin' Things All Around FrippleTown



$29.95, Edmark
800-320-8377
www.edmark.com
Ages 4 to 8

When reality's sky is gray and cold, friendly Fripples will coax your wistful child away from the window. The sun is shining *All Around FrippleTown*, and playing will lead your kids to learning.

Once they explore each of the four colorful activities, how children want to be challenged will determine which exercise they'll gravitate towards.

Kids will acquire a sense of direction when Fripple Deliveries instructs them to drop packages to eager Fripples at particular destinations. Beginning map-reading skills are also learned, because getting lost means referring to a pop-up grid for guidance.



At the Fripple Flag shop, kids must analyze, compare, and contrast attributes before making additional flags that adhere to each customer's favorite pattern. This becomes the most creative place, wherein kids figure out the pattern that will match, because they must then use a simple illustration palette to complete the task at hand.

Kids will be tickled at the Fripple Skate Park, but they may get confused. Here your child picks a sequence of numbers and Flo the Skater demonstrates how these numbers translate into art. With 4 - 4 - 4 - 4, for example, Flo too-quickly skates a star. Kids'll get a kick out of the shapes that appear, but may question how they came to be. A slow-motion option to observe any given pattern would have been great here.

Overall, *FrippleTown* is sure to delight and teach. Its activities are fresh and engaging. When it comes time for your kids to get outside to run around on a clear day, you'll find they'll probably want to stay in with the Fripples to exercise their brains for just a little longer.

—Carolyn Blackburn

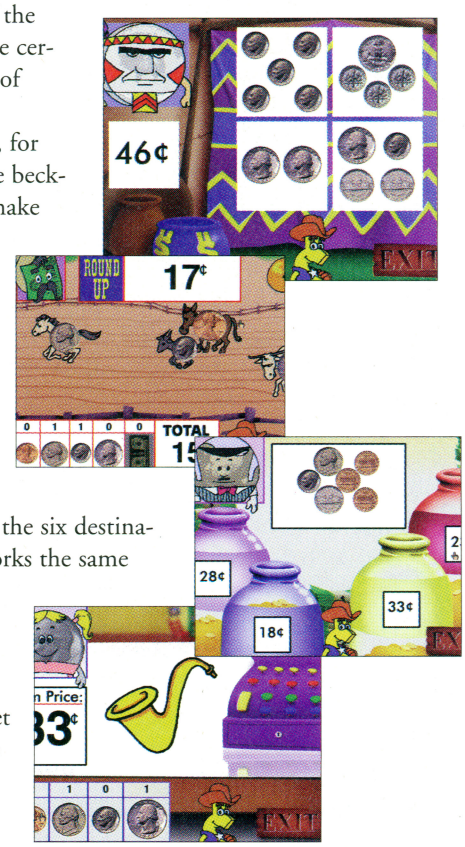
Dollarville



$19.95, Waypoint Software
www.waypointinc.com
Ages 5 to 9

Dollarville strives for the reputation of an engaging honky-tonk haven where kids can learn basic money skills before busting open their piggy banks, but after galloping through it you'll find it's really just a ghost town with entertainment equivalent to some spare change.

Upon entering, kids indicate their grade level and become sheriff. Their task is to help out the townspeople in matters of money. If your kids haven't already made sense of the almighty dollar, they're certain to learn a couple of things here.



At the general store, for example, Clemendime beckons kids to help her make change out of the cash register. At the Indian reservation, Buffalo Nickel needs guidance in determining which value is different from the rest. It won't take long for youngsters to realize that each of the six destinations in *Dollarville* works the same muscles of addition and subtraction in repetitive ways. Practice does make perfect if kids don't get bored before the skills sink in.

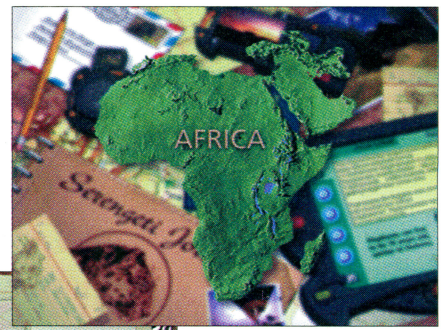
If your little gunslinger is fast on the draw, he or she will most likely grow impatient with the game's sticky resistance to mouse commands. At the rodeo, where kids are asked to tally up a given total by clicking on animals of varying worth as they stride by, the most action-packed place turns frustrating, because pointing and clicking might slow them down.

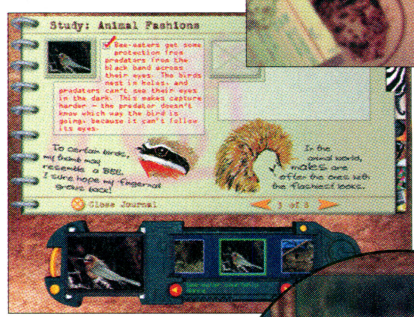
The characters in *Dollarville* are inviting, and there's no doubt your child will learn that the quarter you pull out of your pocket is worth more than the dime. The title spends a lot of time covering simple subjects over and over again. These money-intensive activities will work if you force your kids to do them. But you could have as much fun interacting directly with your child, sorting through the change saved in that piggy bank.

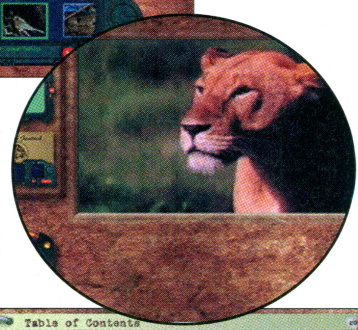
—Carolyn Blackburn

Nature — Virtual Serengeti

$29.99, Grolier Interactive
203-797-3530
gi.grolier.com











Based on the popular PBS series *Nature*, *Virtual Serengeti* promises to give children their first experience on a photo safari. The premise is this: George Page, the host and executive editor of the *Nature* series, has sent you to Kenya as a research assistant to help complete field work on animal behavior. Armed only with a compass, an electronic "encyclopedia," and a special video recorder, you are to assist Field Scientist Dr. Elgin Carp in capturing animal footage. The only problem is that Dr. Carp can't seem to make it — whether it's because he spent the night waiting for lions to evacuate, he was delayed by investigating other animals, his jeep broke down and he can't speak Swahili to the townspeople, or any other small catastrophe. He also keeps e-mailing you from his journey to let you know his progress, or lack thereof.

The main focus of your virtual experience is to learn how animals adapt to conditions in East Africa — for food, water, and survival. Using the journal that Dr. Carp leaves behind, you refer to the footage you "shoot" to answer questions about environment, animal fashions (skin, fur, colors, and patterns), anatomy, endangered species, sounds, and body language. This, of course, means that you need to figure out which video clips are the right ones to use in order to complete each study. When you're finished, you are to send your footage back to George Page in New York City, where he will edit it into the new *Nature* special.

As research assistant, you travel to various locations by foot, truck, plane, or boat — even hot air balloon. Clicking on the compass brings up a small map of locations you can reach in the surrounding areas. Luckily, you don't need to trek all the way back from a long trail, since you can return to any spot you've been previously merely by clicking that spot on the map. The landscapes are gorgeous, and *Virtual Serengeti* makes use of QuickTime VR to allow you full panoramic views. The video clips are as excellent as we've come to expect from the PBS series, and kids of all ages will enjoy bizarre mating rituals, young animals at play, and the thrill of the hunt.

Unfortunately, most of the user's time will be spent combing the landscape for the little sounds that will produce footage. On most landscapes, there are a few spots where the pointer will become a pair of brackets. When this occurs, an animal noise is made, and by clicking on this spot, you will "record" footage of various creatures. Usually, there isn't even an image of any animal there — just spots where animals could lurk. And when there aren't any interactive pockets in the scenery, you can't help but feel a little frustrated.

If these movies were a bit more intertwined with the actual story, or even with the surroundings, this learning title might be improved. As it stands, however, the whole affair feels awkward and oddly compiled. For example; in one area there is a herd of gazelles seemingly marching towards the horizon. The video clip hidden in this area is nowhere near the gazelle, the only living things in the picture. The clip in this scene was placed out in the middle of a blank patch of beige sand and dirt. If I didn't know any better, I'd call it a flat piece of empty land.

After spending hours searching through the various settings and "filling in the blanks" in Dr. Carp's journal, your child will definitely learn more than a few things about animal life in the Serengeti. But mostly it is an exercise in futility, and I can't imagine them using the software ever again after they solve it once. My advice to you is to watch the PBS specials with your children and ask them some questions about them afterwards.

—Thomas Mulhearn

Music Ace 2



$50, Harmonic Vision
800-644-4994
www.harmonicvision.com
Ages 8 to adult

The original *Music Ace* (reviewed in May, 1997) provides little Mozarts-to-be with an excellent training in music theory. With plentiful cartoons of singing notes and animated musical instruments, *Music Ace* eases the novice through 24 lessons covering the basics of notation, pitch, dynamics, and getting around the staff. *Music Ace 2* builds on that foundation, providing 24 slightly more-advanced lessons covering rhythm, melody, key signatures, and scales.

The main menu looks like an open book, and buttons for each lesson appear on the right-hand page. Each lesson is also accompanied by a game, and up to six different students can measure their prowess with each new skill. And at any moment you can hit the Doodle Pad button on the left side, which will plunge you into a composition arena where you can work out ideas on a piano, drag notes to a staff to create melodies, save your creations, and hear prerecorded selections.



As with the original, the lessons in *Music Ace 2* are very well paced — each one is just a hair harder than the one before it. I must admit I was a real stinker, getting everything wrong and pretending to be completely tone deaf and arrhythmic. But *Music Ace 2* was very patient. When I screwed up the "marching band" exercise, in which I had to press the space bar to the beat of the music, "Maestro Max," the virtual teacher, slowed down the tempo and gave me another chance. He shows a variety of reactions, depending on how much help you need, so the program feels a bit less computerized than many educational titles.

The *Music Ace* series allows you to output all of its music and sound to MIDI, so if you have an external sound module (they start at around $200), you can play some deep, rich music right from your Mac.

The only problem I found with this stellar piece of educational software is that it forces your monitor to to set itself at 256 colors, so your other open programs will look a bit off-kilter when *Music Ace* is running.

— David Weiss

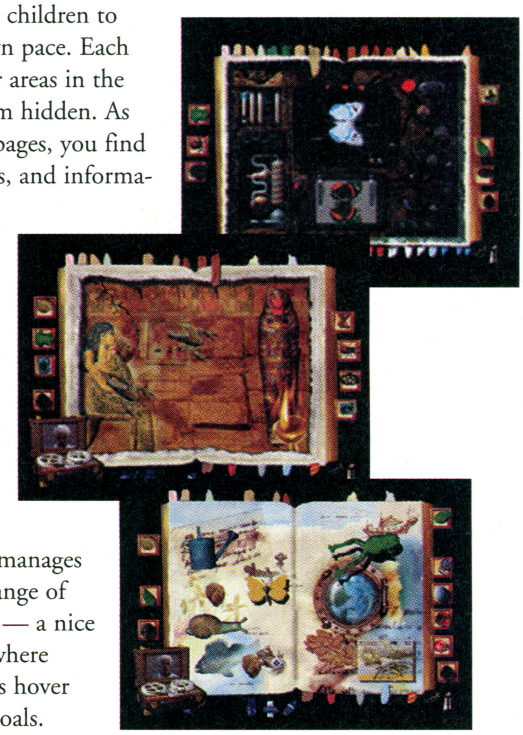
Uncle Albert's Magical Album



Vtech Software, $29.95
www.vtechsoft.com
800-742-1050

Your crazy old Uncle Albert has left you his journal and it's your job to navigate through it in order to find the treasures held within. This is definitely not your typical learning-title premise. Right from the start, *Uncle Albert's Magical Album* sucks you into its world. The story behind the game is rich and fully fleshed out, bringing to mind the plots of such games as *Starcraft* and *Myth*. It is always a sign of good design when a game's story brings you back for more.

But story isn't all that's here. The magical album itself is laid out in a nonlinear fashion that allows you or your children to explore at your own pace. Each page leads to other areas in the book, most of them hidden. As you uncover new pages, you find new items, animals, and information about your uncle. The story unfolds with the help of many learning-based puzzles. These puzzles encompass everything from biology to music to astronomy. This is one of the few titles that manages to cover a broad range of educational topics — a nice touch in a world where most learning titles hover around the same goals.



The visuals are wonderful; you really get the feeling that you're looking at someone's treasured journal. Each page is covered in sketches, water colors, and ink spills. The sounds and music help to keep the book-like feeling throughout. As an added bonus, all this creativity can rub off on your child in the creation of their own scrapbook, which they can assemble and print out from the album's final page.

Alas, the beauty of the album can be a hindrance in some cases. There are times — most notably whilst assembling the rocket — that the book slows down to a mere crawl even on the fastest of CD-ROM drives. This is an extreme annoyance as there seems to be no way around the stuttering, and no visible reason to cause it. There are pages that cruise along without a hint of trouble, while others with seemingly less activity on them come to a complete standstill during interaction.

—Alex Handy

By Alex Handy

We Aren't the Champions

A Guide to Getting Your Butt Kicked in New York

Winning ain't all it's cracked up to be. After being the two-time top contender for the *Carmageddon* crown at the National Macintosh Gaming Championship, I had a lot to live up to at Macworld New York. As my co-workers were so fond of pointing out, I had never been beaten at the game [*editor's note*: this is all true, we swear].

Not only that, but I was apparently becoming something of a Moby Dick to some aspiring champions. From the moment I set foot on the floor, I knew I was in for one hell of a fight.

Ever since Macworld New York back in 1998, the National Macintosh Gaming Championship has been at the forefront of the Mac gaming community. It's the only place for die-hard *Quake*rs to rub elbows with arm-chair *Civilization* gods. Some competitions can last for a few minutes; other run for hours on end with no real excitement until the final critical moments. With so many prizes and so much glory at stake, many gamers would rather sit back and wait through the agonizing tension rather than attack too soon and confront defeat.

Day One

Unfortunately, I was not so lucky as to be afforded the luxury of waiting. As I stepped up to the line to be admitted onto the playing field, Vinny Salzillo, the man who heads up the whole affair, saw an opportunity to exploit my fame. "Ladies and gentlemen, Alex Handy, the reigning king of *Carmageddon* is in the next round. He'll be at table #4, so unless you want to face him, I suggest you trade tickets." Great, thanks Vinny. I was counting on the relative anonymity one can garner in the championship to protect me until the final round. Now, however, everyone would know who I was.



Vinny's company, Double Exposure Inc., started this competition when the Macworld Expo moved to New York. Vinny had been president of NYMUG (New York Macintosh Users Group) and saw an opportunity to bring his expertise at running gaming events to the show. And that expertise has paid off. Whereas in the first competition the largest prizes were $200 graphics cards, after only one year, the monarch of the competition stands to win over $15,000 worth of stuff. Not only can the grand champion cozy up to a brand new G3, resplendent with an Intensor gaming chair and a 17" monitor, they'll also be whisked away by plane to the next Macworld Expo. Of course, they'll then have to deal with the challenge of defending their title.

And defending a title is not easy. In the first round I had to deal with three maniacs all hell-bent on snatching my crown. As an added bonus, a bounty was placed on my head: Anyone who could beat me would win a joystick for their troubles. As the race began, the adrenaline rushed into my veins and I was competing once more. There was a time when soccer, football, even baseball satisfied my desire for competition, but no more. Now, I crave the grinding of steel and screams of agony that can only be gleaned from a *Carmageddon* competition.

Of course, *Carmageddon* isn't the only game available to competitors. *Quake*, *Unreal*, *Myth II*, *Jazz Jackrabbit 2* (I won

this game in San Francisco by default), *Civilization*, *Tempest 2000*, and even *Tomb Raider II* are all up for grabs. It has become all the rage amongst developers to have their games placed in the competition. Some games that had been released only a week before the show were up for grabs too, such as *Age of Empires*. Of particular note were the team competitions, which are reserved for only the most highly competitive games. *Starcraft*, *Quake*, and *Myth II* all had team tournaments alongside their normal ones.

Carmageddon, however, is a single-player event. For those of you who've not seen the game, it's basically a video-game form of the movie *Death Race 2000*. You try to destroy your opponents' cars in a demolition derby that claims more than a few civilian casualties. In competition, the rules for victory were only solidified this year. Last year, each round had different rules, as tournament judges wrestled to understand a game they had never seen before. In San Francisco, there was confusion as to which options were allowed for which types of games. Now, however, the rules are clear: Whoever has the most credits at the end wins. If you die, you lose.

OK, so maybe I'm sounding a bit dramatic, but you should see some of the people who surface for these games. The *Myth II* players are certifiably insane. Most of them wear *Myth*-related clothing and stand around with ale mugs awaiting their next conquest. *Quake* players, on the other hand, tend to be the strong, silent type. It's not uncommon for a *Quake* champion to win by over 100 points, yet remain speechless throughout the tournament.

I didn't keep my mouth shut for long. After my flawless victory in the first round, I leapt out of my seat to the cheers of the crowd that had gathered. The flashing lights and pounding techno music that permeated the gaming area were perfect companions to my triumph. I was beginning to get cocky. Perhaps this was my downfall.

While the gaming championship occupies a healthy portion of their time, Double Exposure is not limited to computerized events. The company can be found administrating live-action role-playing events across the country. After witnessing some of these events, even *Myth* players can seem tame. Live-action role players are a very dress-up oriented group, and fit right in with some of the Double Exposure staff.

Day Two

After a good night's sleep, I returned for the semi-finals. These had always been the hardest round. In San Francisco, I had played my longest game ever against an extremely skilled opponent in the semi-final round. The bout stretched over nearly an hour as we jousted back and forth on top of a hill, waiting to see who would run out of money or courage first. Finally, he broke and ran, and I pursued him until I pinned him against a wall, crushing his car beyond recognition. I knew this round would be tough.





But I was not alone in my troubles during the semi-finals. Michael Garrison, the grand Poobah of the San Francisco championship, was ousted from his throne in the semi-finals of *Marathon*. After winning a new G3 and a trip to New York, he was poised to be the one to beat in many competitions. Fate, however, would hand Michael a different hat. He failed to win any of his competitions. Moreover, he lost repeatedly to Zack Stern, the man who would eventually vie for my *Carmageddon* title.

The tournament had its happy endings for some, as Robert Avery proved. Robert showed up for his final round in the *Starcraft* team tournament, only to find that his teammate had left the show. While most competitors would have been reduced to a quivering pile of goo, Robert swallowed his pride and vanquished two players single handedly. Forty-five minutes later, he returned to win the *Starcraft* singles tournament. Lets see those PC boys beat that!

Every gaming station at the tournament was a finely tuned machine. Each station was a 350-Mhz blue-and-white G3 with an Intensor gaming chair. Not only did the gaming chairs bring deafening bass through their buttocks-level subwoofers, they engendered a lot of lewd jokes from Sean, the event's besparkled emcee. Often, Sean was more fun to watch then the actual competition. He kept the commentary running for almost eight hours a day, all the while wearing shiny pants.

As I lined up for the semis, Sean the emcee attacked me, microphone in hand, and began pumping the crowd for my second round. This time, the bounty on my head had been increased to $100 dollars worth of goodies. I suppose my first mistake was choosing the ice level for the competition. As reigning champ, I had the honor of choosing the map, and this time, I'd decided to go with one that most players hadn't seen: "Fridge Racer."

Of course, most of the other competitions were much more strictly ruled. Cheating is outlawed, of course, as is abusing any bugs found in the games. Of course, most players know these games better than anyone watching, and can therefore hide a lot of their tricks from view. These players aren't your typical Sunday gamers; they've played these games more than the people who programmed them. As Mark Adams, president of Westlake Interactive (and the man who brought us *Unreal*) says "I'd compete, but I'd probably get my butt kicked. And I'd never hear the end of that."





I had to learn that lesson the hard way. After a scant five minutes of gameplay, I decided to risk all and pin one of my badly damaged opponents against a tree. Little did I know that he'd picked up more armor than I had. As I crushed his car against a nearby pine tree, my car exploded into flames and I lost. I had not just lost, but been humiliated. I had committed suicide before the game had really even begun. And just like Mark, I would never hear the end of it.

That night while having drinks with friends from the conference, I was greeted the same way by one and all: "What happened?" "I hear you lost," and "What's wrong, do we need to give you some lessons?" I was being introduced to people I'd never met before as the "former" champion of *Carmageddon*. Oh, the sting of victory eclipsed!

Day Three

The wheat had officially been separated from the chaff by the third day. Yet most of last year's victors were nowhere in sight. Vinny Salzillo was lamenting the fact that no one had surfaced as a potential grand champion yet.

A grand champion must win all three of their allowed events, however — no small task. There were a few contestants left who had a chance, but they were all in the larger events. Usually, the champions were victors in only one of the major events, such as *Quake* or *Marathon*. The other two events were typically one round only, such as *Astrorock 2000* or *Slithereens*. This year, however, none of the smaller-event victors had made it to the finals in the big show.

I was still frightened and confused on that final day. People I didn't know were coming up to me and saying, "Hey, you're the guy who lost!" But the most painful remarks of all came from the Double Exposure staff. The same people whom I had taught to run the game a year before were now taunting me. "You've been practicing?" I'd ask. "Yeah, but mainly we've been watching you," was the reply. That evening, I'd get a chance to prove my worth against the staff when they opened their gaming area to the exhibitors after the show floor closed. (I ended up beating the pants off them.)

But by the time the show ended, Vinny had his champion. Ross Wigdor had not only won three tournaments, he had proven that he was the god of first-person perspective shooters. Winning *Quake*, *Unreal*, and *Klingon Honor Guard*, Ross became the new king here. He had to work hard to get there, though. *Quake* is by no means an easy game to win: *Quake* players are single minded and have been known to forgo such trivial things as food and sleep when engrossed in a match.

I've already begun training for Macworld San Francisco in January. Vinny and the gang have, too. According to the brains behind the tournament, "We'll be completely overhauling the tournament in San Francisco. This time, we kept the same basic formula as we had last time. But next time, we'll look completely different and be much bigger." I can hardly wait. Until then, It's nothing but protein shakes and wind sprints for me.

So if you're heading to San Francisco in January for the annual Macworld Expo, be sure to do some finger exercises first. You just might want to test your mettle at your favorite game. You never know how good you are until you compete face to face and on even footing. Who knows — you might even topple the champion from their thone. MH

The Winners

Here's the list of all the winners of all the games. Special thanks to Mac3d.com for keeping tabs on the winners and losers. For a complete list of who participated, head on over to *www.mac3d.com*.

Marathon - Steven Domenico
Myth II - Gerrit Goossen
Quake - Ross Wigdor*
Quake II - Vancito Wallace
Starcraft - Robert Avery
Unreal - Ross Wigdor*
Diablo - Romulo Romero

***Starcraft* Team**- Robert Avery
***Quake* Team** - Anthony Cuni & Jim Hillery
***Unreal* Team** - Jan Ronald Agay & Jan Vincent Agay
***Myth II* Team** - Kenneth Morino & Austin Parker
***Marathon* Team** - Justin Weisz & Jason Parry

Dark Vengeance - Tito Cuadrado
Klingon Honor Guard - Ross Wigdor
Carmageddon - John Cafaro
Tomb Raider II - Corey Obey

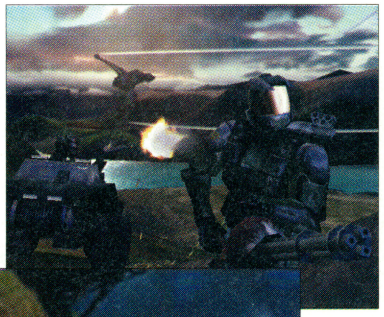
Civilization II Gold - Kevin Gaussoin
Master of Orion II - Alex Tam

Tempest 2000 - Zack Stern
Astrorock 2000 - Matthew Schroeder
Gridz - Zack Stern
F/A-18 Korea - Alex Vallens & Eric Benfer
Slithereens - Adisa Minkah
Alley 19 Bowling - Ryan Vesler

***Grand National Champion** - Ross Wigdor

By Alex Handy

Hello Halo





E3 was a mixed blessing for me. While I got to see all sorts of great stuff, I couldn't say a word about the coolest item on the bill. That is, until Bungie showed it during Steve Jobs' keynote address at Macworld Expo. That "it" is called *Halo*, and I feel that it's safe to say this game will be the proverbial It. The game focuses on a ribbon-like world that wraps around a distant star like a ring around Saturn. The world was created by an ancient unknown race of beings far superior in intelligence to humanity, somewhere along the lines of the Dyson Sphere on *Star Trek: TNG*. Unfortunately, all is not well on Halo; a vicious race of aliens wants to get their grubby little purple hands on it, and thus a violent game ensues.

The game focuses on ground-based combat. Players choose to play on either side, but so far, the humans are more fleshed-out than the aliens. Their arsenal includes all sorts of big fun guns, including two missile launchers, an over-under machine gun/grenade launcher, chain gun, pistol, and even the favorite of gamers everywhere, the combat shotgun. But the juice is in the details. Shell casings fly out of the chambers, smoke belches from barrels, and you can even skip grenades across the water like a stone. Oh, and for you *Marathon* freaks: There's a little-known weapon with the designation SPNK-R SSM.

But we're not through yet. There are dynamically used vehicles too. You and two of your friends can hop into a jeep and go joyriding across the incredible landscapes: One as driver, another standing or sitting shotgun, and yet another in the back manning the turret. There's also a tank, which can seat a driver, gunner, and two hitchhikers outside on the top. The aliens have vehicles of their own, both of which use repulsor-type technology. Their land speeder can coast a few feet off the ground, while their fighter can soar freely.

Halo really wowed 'em at Macworld Expo. The attention to detail in the game is beyond anything seen to date. In the first build I saw, there were numerical registers on the sides of guns to show the ammo left, and the shotguns' empty shells flew directly out of the loading hole in the top of the gun. All the characters bend in just the right places, giving them a flexibility that any G.I. Joe would envy. The vehicles move with more accuracy and realism than is found in most off-road racing games. It's amazing to see how far Bungie can push the envelope of a genre just by aiming some talent at it for a few months. If all this eye candy isn't enough, you can be assured the story behind *Halo* will be the same high quality that we've come to expect from Bungie. I think it's safe to say that Mac gamers have something to drool over for awhile.

Bungie, halo.bungie.com

Shocking Development at Macally

Ever want to really feel your games, I mean get inside them and be brutalized by each and every bad guy? With Macally's new iShock controller, that's becoming more and more possible. The new iShock gets its good looks from the Sony Playstation Dual Shock Analog controller. While the iShock isn't a force feedback joystick, it does feature two nifty analog sticks on it, most commonly used in tandem for racing games. The combination of two analog sticks allows for one side to play steering wheel while the other pulls throttle duty. The iShock also has eight other programmable buttons and a run-of-the-mill eight-direction controller for those nonanalog-compatible games. Sorry, no price yet!



Macally, 626-338-8787, www.macally.com

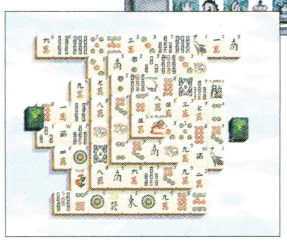
I Want You

Well, that time has come again. Our annual entertainment issue is coming up. In celebration, I'd like to hear what you have to say. Send me your comments, ideas, first impressions of games, or anything at all. We've moved our entertainment section a long way in a short time, but the soul of it is still you, the reader. One of the great things about the Mac community is the fact that it is just that: a community. Let me know what you think of the games we've reviewed. Did we rate something too low? Or did we give five apples to a game you detest? E-mail me at alex@machome.com with "I Want You" in the subject line. Please be polite; I don't like being yelled at any more than you do. Happy gaming!

Hoyle Board Games







$29.95, Sierra Attractions
800-757-7707
www.sierra.com
Power Mac required

Board games have been around for centuries. They hearken back to a quieter time when the entire family could spend a cold winter night gathered around a Parcheesi board or a game of Chinese Checkers, and the kids could beat the stuffing out of Mom and Dad.

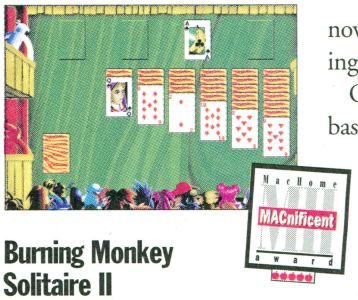
Well, don't despair. Sierra has come up with a collection of 14 classic board games that speak of those gentler times, and they all unfold right on your Power Mac. Many of these games will seem familiar. Others won't. But they're all easy to learn, and in-game help is available on your screen for those that are new to you.

You'll get classic standards such as chess, dominoes, backgammon and, yes, even Chinese Checkers. And you'll get some standards that have undergone name changes. Parcheesi is here, but it's called *Pachisi*. Othello is called *Reversi*. Yahtzee is redubbed *Yacht*. A game most of us know as Mah Jongg, Shanghai, or even Gun Shy is changed to *Zen Bones*, and Snakes and Ladders is known simply as *Snakes*. But the rules are the same, and the games are just as much fun.

You can play against the computer's AI (artificial intelligence) or against another person on the same screen. You can change backgrounds, switch computer opponents, or call up different music at will. And the computer opponents are no pushovers. They're bright and tough, from Marvin the dinosaur to Harley the bear. Your choice of opponents runs from a guy who wears a paper bag on his head to a spaced-out spaceman. There's even a friendly grandmother. They can get pretty caustic with their running commentary — even the grandmother.

All the games have been dressed up with nifty animations. *Zen Bones* gives you 18 different tile layouts, in which matched tiles explode, disappear in smoke, fly away, or just burst into flowers. *Battling Ships*, a game most folks know as Battleships, has arching missiles, smoke, and explosions to mark hits, and spouting geysers of water to show misses.

If you're feeling brave, take this one home, challenge the kids, and get your ears beat off, just like in the board games of yore.



Burning Monkey Solitaire II

Freverse Software, $14.95 downloaded, $24.95 on CD
212-929-3549
www.freeverse.com

The original *Burning Monkey Solitaire* was a great piece of solitaire, but it was hampered by the lack of extra games. Fortunately, in the newest installment of the game, there are 10 games (two of these are technically not new games), and the sounds and graphics are vastly improved. Plus, there are now 10 times as many burning monkeys!

Of course, there are your basic *Klondike* and *Freecell* variations, but included this time are twists on *Spider*, *Pyramid*, and *Go*. Another added perk is the inclusion of a first for an solitaire game: *52 Pick-up*! What makes *Burning Monkey* unique amongst solitaire games, however, is the audience of — you guessed it — monkeys. (And some of them are burning.)

For your dollar, *Burning Monkey II* is probably the best solitaire game you'll find out there. While there are packages that include more solitaire variants, none of them can compete with the originality of *Burning Monkey*.

—Alex Han



Deathground

Freeverse Software, $29.95
212-929-3549
www.freeverse.com

If there is any company that encapsulates all that the Macintosh is supposed to be, that company is Freeverse. The creators of *Jared*, *Virtual Viagra*, and the iVase, Freeverse has become renowned in the Macintosh community as the comic relief of shareware. *Deathground* holds true to all that makes Freeverse wonderful. The game is gut-bustingly funny in the same quirky ways all of their other titles are.

to *Risk*. You place armies o the map in the territories you've captured and then proceed to attack your ene mies with ruthless aba don. However, there a a lot of new ideas here that keep the gameplay fresh. Instead of collect ing cards as you would *Risk*, you are rewarded wit random events that occur whenever you capture a se number of territories.

When I first received thi game, there were scrolling problems that made it a bi hard to move around the map. As soon as I mentioned this to Freeverse, however, they fixed the problem overnight. The extra effort gives them the five apples they so richly deserve. *Deathground*'s addictive gameplay and hilarious jokes will keep yc coming back again to play one more game

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Victorian Mansion



$24.95, Wrebbit Interactive
514-744-8444
www.wrebbit.com
Power Mac required

Here's a family game for parents who worry that their children may be soaking up too much violence in computer play. It's called *Victorian Mansion*, and it's the brainchild of the Puzz 3D people — those fiends who sell giant 3D jigsaw puzzles that can put the dining room table out of commission for weeks at a time.

And that, essentially, is what you get — a giant digital 3D jigsaw puzzle that can be built on your display screen. No violence. No action, to speak of. Just a giant puzzle. Once you finish, you are rewarded with a key that gives you access to the mansion. Inside are more puzzles to solve, a murder mystery to unravel, and a fine old mansion to explore.

But first you have to finish the big puzzle. You can attack it in one of four ways. There's an easy mode with 150 fairly large pieces, but that wins you only a bronze key and restricts you to the lower floor of the mansion. A slightly harder version breaks the puzzle into 300 pieces and earns you a silver key, adding access to the second floor. An even more-challenging version throws 500 pieces at you, and dangles a gold key as the carrot. Now you can go everywhere but the attic.





Ah, and then comes the killer. The super-challenging version gives you 700 nit-picky pieces, and even makes you rotate them. It can keep you at the computer for days. But once you finish, you get a platinum key and can range through the mansion at will.

What do you find inside? Different puzzles. The smaller posers are no real challenge for veteran gamers, but this game is for the kids, and kids may find them to be real brainbusters. You'll learn about the Victorian period as you wander, and you'll encounter clues to a mystery. Wendy, who lived there, provides the commentary and helps players solve the murder of her fiancé, found in the turret after the house was built.

It's a good way to spend pleasant evenings, and you may even learn a little history.

Big Race USA





$30, Empire Interactive
www.propinball.com

In the realm of virtual pinball games, bigger does not always mean better. Just because a game includes numerous tables does not mean it will be as entertaining as the real thing. *Big Race USA* sets out to show us that the only thing that matters in pinball is quality. While there is only one tab in *Big Race USA*, the game features more depth, difficulty, and replay value than most real pinball games you'd find in the arcade.

Not since the days of *Loony Labyrinth* has a pinball game sucked me into its world so well. This solid-state pinball game looks and feels just like the real thing. The physics of the game are right on target: Balls can bounce off of one another, spin backwards, and even get airborne. The game itself requires you to know how to manipulate the ball, as there are some pretty tricky shots you'll need to make if you want to win the big race.



And talk about depth! There are more goals and quests here than in most normal video games. You can visit 16 separate cities, each of which changes the table dynamics. And when you do enter the big race, you'll cruise from state to state in a race against time. Each ramp you hit moves you up a spot in the big race, during which you'll be trying to shoot up to 10 balls at once.

The music and sound effects are perfectly in tune with th game. Some of the voices are a bit ridiculous, but since the game never takes itself seriously, they fit right in just fine with the mood.

Owning a copy of *Big Race USA* is the closest you can ge to owning a real pinball table without having to buy (and store) one. The administration mode allows you to configu everything from slope of the table to how many points you need to get an extra ball. Plus, you can test everything on the board, such as the ramps, lights, and bumpers.

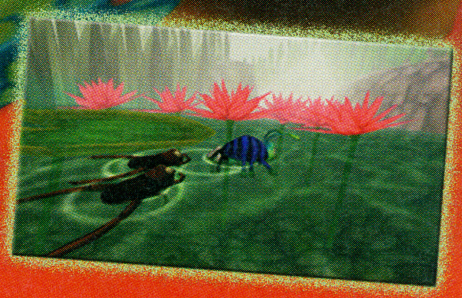
Big Race USA is a must for any pinball monkey. If you find yourself stuffing too many quarters into the local arcade's tables, you need to grab yourself a copy of *Big Rac USA*. Besides, I'm sure your spouse would be a tad disturb if you moved a real pinball table into your living room.

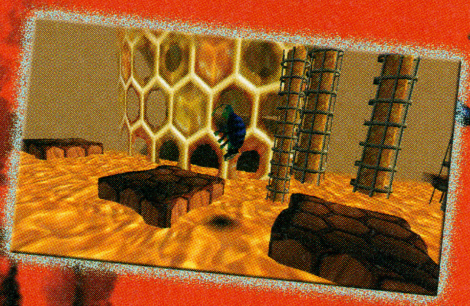
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Quake II



$45, Activision

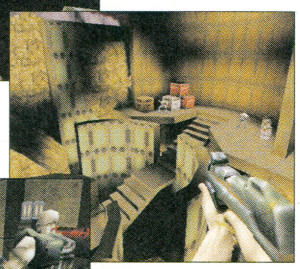
www.activision.com

The original *Quake* was a bird of many feathers. The single-player game was challenging and fun, while the online play almost single handedly founded the Internet-gaming movement. With the sequel hitting the Mac after almost a year's delay, Mac *Quake*rs are finally getting a look at what PC users have been raving about for so long. Unfortunately, the sequel does not live up to the standards of the original.

By releasing *Quake II* so long after its original creation, Activision has a lot going against it. With such games as *Unreal* and *Quake 3 Arena* already showing up in most gamers' lounges, *Quake II* looks very dated. The explosions, especially, show its age and look almost ridiculous. There are very few transparencies, and no reflective surfaces. But we all knew that *Quake II* would not be released on the Mac to compete graphically with *Unreal*. The main draw here is always going to be Internet play. While the single-player game is now mission based and much more fleshed out, it's still pretty hollow.

Right now, playing *Quake II* online is a frustrating experience. There are a lot of improvements over the original, and the ability to use your own skins and character models is extremely nice. You'll be laughing yourself silly the first time you see South Park's Cartman running down a hall being chased by a herd of Daleks from Dr. Who. But for the most part, online play is not nearly as exciting as before. One thing *Quake II* needs badly is a set of movement-predictions tools, like those found in *QuakeWorld* and *Quake 3 Arena*. These speed up Internet play considerably, and without them, playing *Quake II* over a modem is quite frustrating. Even with a fast Internet connection, players vanish from view frequently, only to return out of sight. Another problem comes from the lack of third-party add-on support. *Capture the Flag* is included on the CD, but I'll be darned if I could get it to work. Everything needed to play *CTF* had to be downloaded from the servers I connected to, and none of the servers would send me the maps I needed for playing. Many times, I would log onto a server and end up waiting while skins and models downloaded, only to find that I couldn't even play on said server because they wouldn't send me the needed maps.







Frame rates are not up to snuff either. The game suffers from chronic frame skipping, and it doesn't seem to gain any speed bonus from skipping them. Adding to the slowdown is the sub-par mouse support. While a recent patch has fixed some mouse issues, mouse input is still sluggish and below the standards of other first-person shooters.

Paradoxically, *Quake II* is another game that seems to have been released before its time. The game seems to have been rushed out the door as soon as it could run without crashing. Maybe in a month or two the game will be fully updated, but right now it suffers from many problems. Unless you're willing to deal with a lot of frustration, I'd wait for the updates.

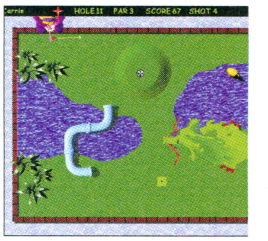
Goofy Golf Deluxe

$24.95, Squeegee Software

800-784-1158

www.squeegeesoftware.com

I'm not ashamed to admit I prefer miniatur golf to traditional golf. Give me some windmills and fiberglass animals over boring, plain, green lawns any day. Those of you wh share this mindset will appreciate *Goofy Gol Deluxe*, a miniature-golf game with plenty o weird stuff that makes planning your putt much more fun.



Three claymation-looking courses are teeming with unusual obstacles. Moving sidewalks, pinball-like bumpers, and a dragon that sears your ball with his fiery breath and sends you back to start the hole over are just a few of the barriers to achieving a nice low score. Just as in real miniature golf, some holes seem impossible to achieve par on; others are easy holes-in-one.

Unlike in other golf games I've played, once your ball hits the hole, it sticks there, never bouncing out. More importantly, the physics of *Goofy Golf* feel just right. Holding the mouse button or the space bar down brings your club back farther, so you hit the ball harder and it bounces off walls and oth obstacles appropriately. Unfortunately, there an element of repetitiveness to the game, with perhaps not enough variation in desigr There's a course creator if you get sick of th three supplied courses, but if you're not creatively inclined, you will probably get bored with the ones provided.

I also experienced several unexplained crashes: after installation, when trying to access the help menu, and when trying to access the course creator. Subsequent tries worked, but the crashes were annoying nonetheless.

Overall, though, *Goofy Golf* is a fun game with a broad appeal, perfect for the entire family. There are no barriers to playing, no stupid rules to read, and no controls to mem orize. It's simply easy fun, just like real mini ture golf.

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By Chris McVeigh

Installing the Mac OS on Your iMac

Understanding the Differences Between the iMac Software CDs

Although your iMac is swift and sleek, it's not immune to sickness. Occasionally, your iMac may experience frequent and irritating crashes. Other times it may fail to start up, presenting you with the dreaded blinking folder icon. The remedy often is to reinstall the Mac OS. (The Mac OS, or Operating System, is the software that governs your iMac.)

Apple includes two Mac OS installation discs with the iMac: iMac Software Restore and iMac Software Install. Despite their vaguely similar names, the CDs perform very different functions.

iMac Software Install CD

The iMac Software Install CD lets you reinstall the Mac OS from scratch. The CD contains all the system software, installers for applications such as AppleWorks 5.0 and FaxSTF, and extras such as QuickTime samples.

On the iMac Software Install CD, there's an application called, "Mac OS Install." There are two different methods of installing the Mac OS from this application. The normal installation searches your iMac for an existing System Folder. Once it's been located, the application reinstalls all the operating system elements into the current System Folder. This replaces items that may have become corrupted, but leaves in place any panels and extensions you have added, such as Adobe Type Manager or Snapz Pro. Your system crashes may be linked to such third-party software, and if that's the case, simply reinstalling the Mac OS won't cure what ails you.

The second method of installation is a "Clean Install." Instead of overwriting software in your existing System Folder, a clean install creates a fresh new System Folder, ensuring that corrupted files are left behind in the "Previous System Folder." It also leaves behind any control panels, extensions, and fonts you might have added. You'll need to dig through the Previous System Folder and drag the items to the new System Folder, or reinstall the items.

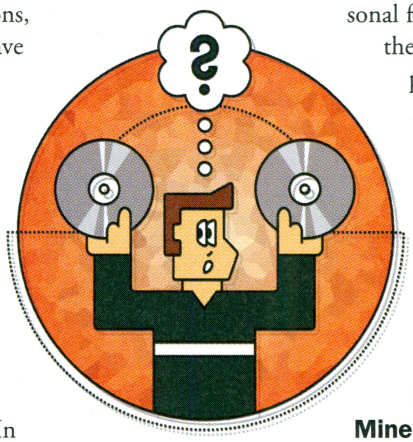
To perform a clean install, launch the Mac OS Installer and click "Continue." In the bottom left corner of the next window, you'll see an "Options" button. Clicking that button takes you to a small dialog box that gives the option to "Perform a Clean Installation."

iMac Software Restore CD

The iMac Software Restore CD offers two options: "Erase and Restore" and "Restore in Place." Most new users find reinstalling the operating system a daunting task. The iMac Software Restore CD should simplify the process.

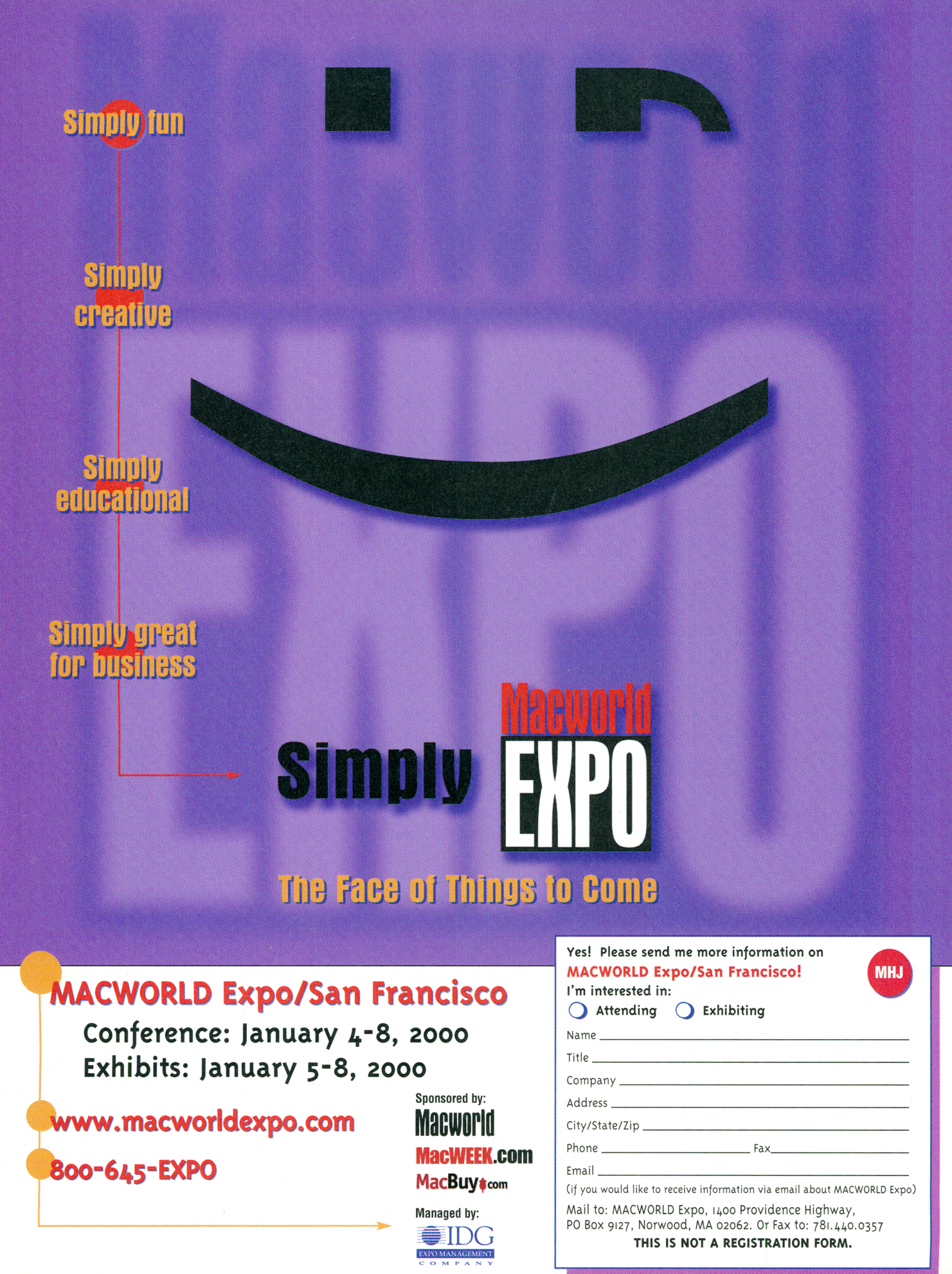
"Erase and Restore" lets you to wipe your hard drive clean and reload the exact same configuration of software that you found when you first turned on your iMac. This can be risky, as it erases any documents or files you've added to your system. You must be confident that you want to wipe the slate clean when you choose this option.

"Restore in Place" replaces the system software and applications with the versions on the iMac Software Restore CD. This option won't erase your hard drive, and keeps new software and personal files where you left them. It also leaves in place any added control panels, extensions, and applications. If your crashes are caused by third-party software, "Restore in Place" won't help.



Eeny, Meeny, Miney, Moe

There are no hard-and-fast rules for choosing different installations. In my experience, it's always best to perform a Clean Install from the iMac Software Install CD. This prevents your files from getting lost and ensures that untainted system software is powering your iMac. However, any system updates you might have applied must be reinstalled, no matter which option you choose. MH



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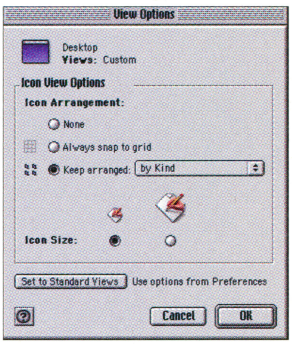
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Getting the Most on Your Desktop

The Finder desktop is a very convenient place to store recently created documents. Unfortunately, it can become cluttered very quickly. If you don't file new items on a regular basis, you wind up with document icons all over your desktop. Thankfully, Mac OS 8.5/8.6 offers a way to get more onto the desktop and yet take up considerably less space. While in the Finder, click anywhere on the desktop background. Go to the "View" menu and select "View Options… ." You should see a small blue icon next to the word "Desktop" in the top left. Just below it will be a box titled "Icon View Options." Select "Keep Arranged," and choose "by Kind" from the adjacent pop-up menu. Toward the bottom of the window, you'll notice an option allowing you to change the icon size. Select the small icon, and close the window. The files on your desktop are instantly transformed into a listing. And since you've chosen to keep the files arranged "by Kind," all similar files are grouped together. At a resolution of 1024 x 768, your Macintosh can list just ten regular icons down the right side of the desktop. However, with small icons, you can squeeze 31 items in the same space!



Easy MP3 with QuickTime 4

The MP3 format is revolutionizing the way music is distributed. The compression standard offers high-fidelity sound in a file one-tenth the size of traditional CD tracks (4MB vs. 40MB). This has made high-quality songs very easy to download from the Internet and play on your Macintosh. If you've visited some of the popular MP3 sites and downloaded any songs, however, you've likely run into bizarre file names that make little or no sense (such as %Song%by%Great%Artist). Even more strangely, the files sometimes show up in the Finder as Netscape or Internet Explorer documents. Double-click on the file to play the song, and you're presented with an annoying page of garbled text in your Internet browser.



Sensing an emerging standard, Apple wisely included an MP3 decompressor with QuickTime 4. MP3 songs can now be played with the new QuickTime Player and also in Internet browsers via the QuickTime 4 plug-in. QuickTime 4 also helps out with those silly names and incorrectly identified files, too. Simply rename the MP3 file anything you wish and add ".mp3" at the end. The Mac OS automatically recognizes the file as a QuickTime 4 document. Simply double-click on the file to launch QuickTime Player and listen to the song.

Oh, Be Quiet

Mac OS 8.5 introduced an auspiciously helpful feature known as Talking Alerts, which are active by default under Mac OS 8.6. In the event you have stepped away from your Macintosh for a few moments, the operating system uses speech synthesis to speak the text of any alert messages the appear. This is a pretty nifty trick, but the feature quickly becomes disconcerting. Say you've received an important phone call and your Internet connection happens to drop. Seconds later, a voice booms "Apple Remote Access. You have been disconnected." Thankfully, there's an easy way to quiet down your Mac's disconcerting voice. Simply open the Speech Control Panel and select "Talking Alerts" from the popup menu. In the box below, unclick both "Speak the phrase" and "Speak the alert text" options. You'll no longer be pestered by robotic chatter.

share your tips!

Got some tips you'd like to share with your fellow *MacHome* readers? Please send them to:

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All mail is assumed intended for publication, and we reserve the right to edit tips for brevity and clarity. When sending your tips, please make sure to include your full name.

Mac OS Update Watch

Mac OS 8.6.
This major update to the Mac OS incorporates loads of bug fixes and stability enhancements. It also sports an enhanced Sherlock search engine, additional support for USB devices, and ColorSync 2.6. The update is available free of charge from *www.apple.com/macos/*. Mac OS 8.5 is required.

ATI Video Software Update 1.0
The latest ATI video update provides improved 2D and 3D acceleration for iMacs and other Macintoshes with an on-board ATI Rage Pro graphics accelerator chip. You can find the update at *http://asu.info.apple.com/swupdates.nsf/artnum/n11475*. Mac OS 8.6 is required.

Mac OS ROM Update 1.0
This update fixes an occasional problem that occurs after startup, when the keyboard/mouse does not respond when a mouse is attached to the top (or left) USB port and a keyboard is attached to the bottom (or right) USB port. You can download the update from *http://asu.info.apple.com/swupdates.nsf/artnum/n11476*. Mac OS 8.6 is required.

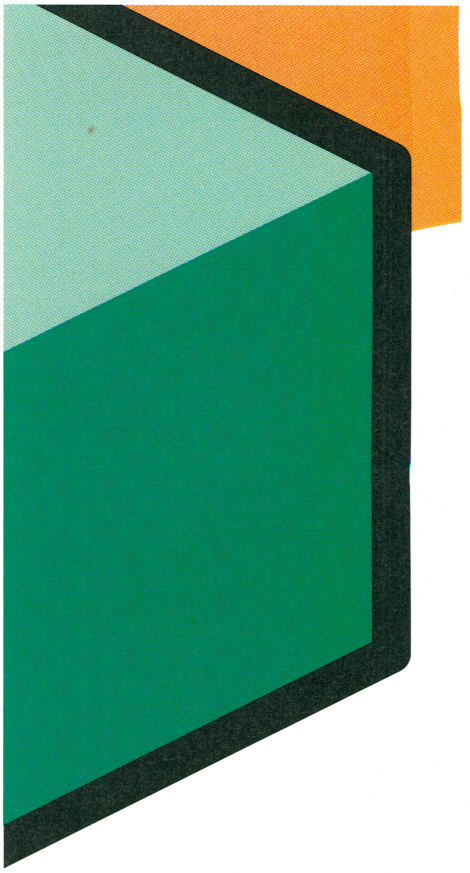
QuickTime 4.0
Apple's multimedia software has been given and major makeover. QuickTime 4 features a stylized brushed metal interface, improved audio compression, and support for streaming channels over the Internet. You can find QuickTime 4 at *www.apple.com/quicktime/*.

Font Manager Update 1.0
The Font Manager Update fixes several major bugs introduced with Mac OS 8.6. In certain circumstances, the Mac OS 8.6 Font Manager will create a corrupted resource in some applications or fonts. When this occurs, the font cannot be moved or deleted. You can find Font Manager Update 1.0 at *http://asu.info.apple.com/swupdates.nsf/artnum/n11489*. Mac OS 8.6 required.

G3 CD Update 2.0
The G3 CD update installs new firmware on some 24X CD-ROM drives. Some Power Macintosh G3s will freeze when put to sleep if a CD is in the drive, or the CD will take an especially long time to spin up when the computer is awakened. The G3 CD Update 2.0 ensures that the CD drive sleeps and wakes up properly. The update can be downloaded at *http://asu.info.apple.com/swupdates.nsf/artnum/n11130*.

Taking out the Trash

Although I take great pride in the neatness of my Finder, I often open far too many folder windows, obscuring my hard drive and trash icons. It's especially aggravating when I'm attempting to clean house. I'll select several items I want to toss out, but I can't find the trash icon! Conventional thinking would lead me to deselect the items and close window after window in search of the trash. Once it's been located, I then have to reselect every item I want to throw away and drag them to the garbage. This can be terribly annoying. Thankfully, Apple has included a series of Finder shortcuts in Mac OS 8.5/8.6 to help speed up the process. Hold down the control key and click on any file in the Finder. A pop-up menu appears, providing you with a list of options. Simply select, "Move to Trash" to get rid of the file without any dragging and dropping. Not fast enough, you say? Try this instead: click once on the file you wish to toss out, and then press command-delete on the keyboard. Whoosh! The file vanishes into the trash can.


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Installer Trashing, QuickTime Smashing, and Going Pro

Q After successfully downloading a piece of software, can I trash the installers without affecting the application's performance? I have several installers on my Macintosh that together take up over 60MB of hard-drive space.

— George Earnshaw

A Once you've installed an application, you can certainly throw away the installers. An installer places exactly what you need on your hard drive. The only reason to keep an installer is in the event you want to reinstall the application (say, if you accidentally throw the application away). Otherwise, send all the installers straight to the trash can.

Q I was wondering if you know how to compress a QuickTime movie to a certain size and still get reasonable quality. I am trying put some home video into a digital format so that I can save it on a CD. Right now, fifteen minutes of video compresses to a whopping 1GB, and of course, I can only get 650MB on a CD.

— James Nehring

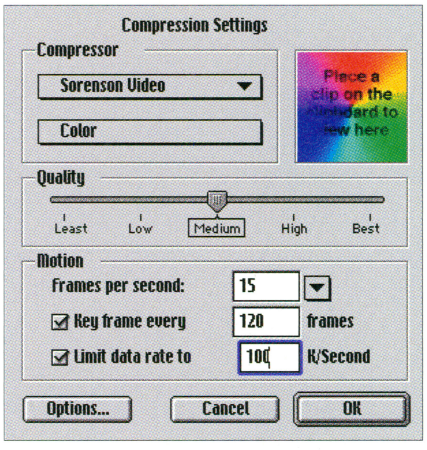
A To compress QuickTime movies to a manageable size, you need to make a few smart decisions. This starts with the recording process.

It would be nice to record the video at a resolution of 320 x 240 and 30 frames per second, but as you've seen, the space requirements are outlandish. Try recording at 240 x 180 and 15 frames per second, with 22KHz mono sound. These settings should suffice to show a modest amount of image detail, and the reduced frame rate saves many megabytes of hard-drive space while still conveying fluid motion.

Many QuickTime digitizing applications let you "post-compress video." This way, you are telling the computer to compress the video only after it has been recorded. This is extremely important, because it allows the processor to devote all its time to recording the video.

Otherwise, the processor has to do double duty, recording the video and compressing each frame it grabs. Video captured like this tends to have low, uneven frame rates that make the video appear to "stutter" when played back.

Once you've got the video on your hard drive, you'll need to compress it.



(Even if your computer compressed as it recorded, it's a good idea to recompress the movie. It will almost certainly further reduce the size of the file). Most QuickTime authoring applications use the same basic options window for compression settings. Select "Sorenson Video" as the compressor. The Sorenson Video codec (compressor/decompressor) offered with QuickTime 3 and later offers the best-quality video compression. In the "Quality" box, move the slider to "Medium." Sorenson performs best at this setting. In the "Motion" box, set the frames per second to 15 (or at the rate you recorded the video).

Setting a key frame can help further reduce the size of the file. A key frame is basically a snapshot of a single frame that serves as a template. Subsequent frames will only note the visual difference between that frame and the key frame. This is especially effective when the camera is rather still and the background elements remain the same for a period of time. If significant portions of your video have still backgrounds, place a check mark beside "Key frame every" and type 120 into the box at the right. If you've got plenty of fast motion in your video, then skip this option.

You can control the overall file size by limiting the data rate. Many QuickTime movies push about 175k per second. Try limiting the data rate to 100k or less. In fact, if you want the movie to fit on a single CD-ROM, you can figure out the required data rate based on the length of your video. Let's say you have 60 minutes of video. That's 3,600 seconds. Since a CD can only hold 650MB, or 665,600K, that means you simply have to divide 665600/3600=184. That means your data rate can be up to 184K. The resulting video will be no more than 650MB in size — and in fact, since the movie won't push 184K per second all the time, it's likely to be somewhat smaller.

Q Recently, I was trying to add the *Star Wars* commercial movies to the Favorites Drawer in QuickTime Player. I can't get them to stay in the Favorites Drawer! I go to the QuickTime Showcase, load the movie, and it plays fine; but I don't want to have to download it in my Internet browser every time. I want to be able to have the movie in my Favorites Drawer, just as you showed in Tips & Tricks in MacHome's August 1999 edition. Do I have to have QuickTime Pro?

— Karl Hlawatsch

A You've hit the nail on the head, Karl. To download movies from the Internet and be able to store them for later playback on your hard drive, you need QuickTime 4 Pro. Otherwise, the QuickTime plug-in for your browser offers no way for you to save the file. It's a shrewd move by Apple to get you to pony up $30 for QuickTime Pro, certainly. But it's very much worth it.

Once you have QuickTime 4 Pro, you get several ways to store movie files. The most obvious way is simply to click on the requisite link and allow the movie to download into your browser. Once it's played through, click the small triangle in the bottom right, and you'll get five options. Select "Save as QuickTime Movie..." and store the file somewhere convenient on your hard drive. You can then go to Finder, locate the file, and double-click it to open the movie in QuickTime Player. To add the movie to your Favorites Drawer, select "Add Favorite" from the Favorites menu. The QuickTime Player monitors the location of the file for you, so don't fret about moving the movie into a different folder.

Q If I attempt to access the submenu in the Automated Tasks item in the Apple Menu, my desktop goes blank. Soon after, icons start reappearing as if the computer were restarting, and I lose the Launcher and all submenus in the Apple Menu. When I restart, everything is normal until I try to access the errant menu item again; then the cycle of aberrations that I've detailed above happens again. What gives?

Fernando Robles Jr

A Your description suggests that your Finder is actually spontaneously restarting. You've no doubt encountered the message, "The application has unexpectedly quit due to an error... ." Well, this occasionally happens to the Finder, too.

The Automated Tasks item uses a piece of system software known as AppleScript, which is inactive until called upon. It seems that some element of AppleScript has become corrupted. When you select an automated task, it activates AppleScript, which then introduces a fatal error to the Finder, causing it to quit. The OS mandates that the Finder be running at all times, so when it quits, it's forced to relaunch. But the OS won't reload any Finder enhancements, such as the Launcher or the Apple Menu Items control panel (responsible for submenus). As you've discovered, the only way to fully revive the Finder is to restart your Macintosh.

To remedy the AppleScript problem, you'll need to reinstall the Mac OS. You can perform a normal install first, rejuvenating the existing System Folder. If this fails to cure what ails you, try a "Clean Install." Instead of overwriting existing items, a clean install creates a fresh new System Folder. This ensures that any potentially corrupted files are left behind in the Previous System Folder. (See New Owners in this issue for more.) MH

let us know!

Got a Mac problem that's driving you nuts? Let us take a crack at it. We'll answer questions of general interest to all readers. All mail is assumed intended for publication, and we reserve the right to edit questions for brevity and clarity. When sending your questions, include your full name and phone number. Send your questions to:

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By Chris McVeigh

Streaming Channels

Radio and Television Networks Hit the Internet

As Internet connections become faster and compression technologies become more efficient, more and more streaming content is finding its way online. A streaming channel is a multimedia file that can be played as it is downloaded, rather than having to wait for the entire file to arrive.

This is significant as it allows content such as radio and television feeds — files with no real beginning or end — to be viewed over telephone lines instead of radio waves or cable.

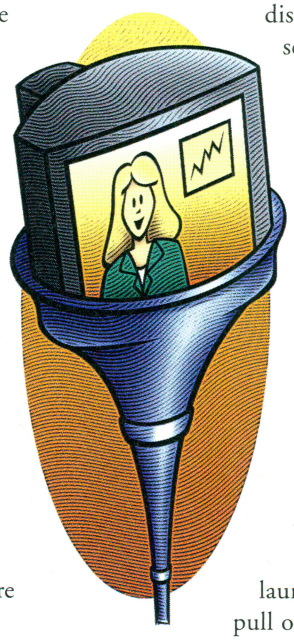
Squeezing the Signal

A standard 56k modem receives data at a maximum of 7K per second — not very fast, considering most QuickTime movies spew forth at 100K per second or more. A streaming channel must therefore be highly compressed in order to transmit over the Internet in real time.

Streaming video is often presented at a resolution of 160 x 120. Consider that a single frame of full-color video is 57K uncompressed. At the industry standard 30 frames per second, that's a whopping 1710K of uncompressed data per second. How then can 1710K be squeezed down to 7K or less? The first step is to reduce the frame rate. The second step involves a high degree of compression.

Digital video compression works by looking for graphic similarities from frame to frame. Consider a video segment showing someone being interviewed. A video compressor notes that elements of the background remain largely unchanged from frame to frame. The color values of the background are noted in a periodic "key frame." The key frame determines repeating color values over the subsequent frame sets, so that data need not be repeated in each frame.

Audio compression works differently. One of the easiest ways to compress audio is to remove an entire piece of audio information at a regular, repeating interval. For instance, when an audio file is decreased from 44kHz to 22kHz, every second block of audio information is removed. Streaming audio is often 11kHz — and sometimes only 5kHz when combined with video. The lower the kHz, the more audible the loss in quality.



Compromised Playback

Once you request a streaming channel, the host server fires off the data to your computer. Optimal playback of the audio and/or video stream requires a speedy connection to the Internet and a relatively uninterrupted connection to the host server. It's very difficult to compress video and audio down to less than 7K per second: The slower the connection, the more quality is compromised.

Streaming channels are frequently hampered by increased Internet traffic, which can result in long delays. To guard against interruptions in playback, streaming applications such as QuickTime Player make use of a memory buffer. The application downloads a selected amount of the streaming channel to memory before it displays the channel. All subsequent data is filed through the same segment of memory as it is downloaded.

Tune in Now

Installing QuickTime 4 is an easy way to sample streaming channels. Generally, you'll find Internet radio streams are of much better quality than the television streams, since audio requires less compression than video.

To access the channels, launch the QuickTime Player, pull open the Favorites Drawer, and click on a network icon to explore.

Today a Stream, Tomorrow a River.

You'll need a very fast connection to the Internet to enjoy streaming TV. Until DSL and cable modems become more commonplace, it's best to flip on your television to watch the news. MH

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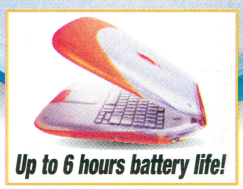
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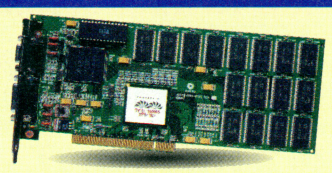
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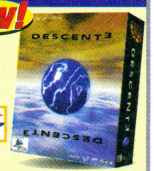
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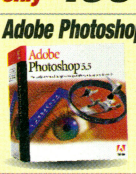
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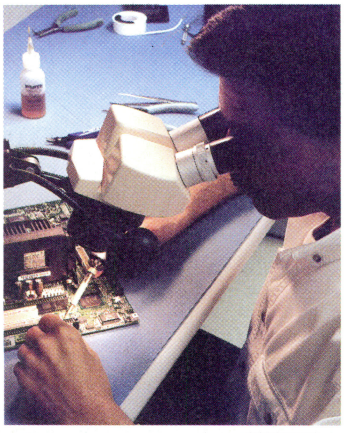
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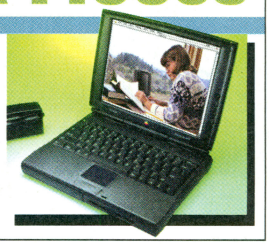
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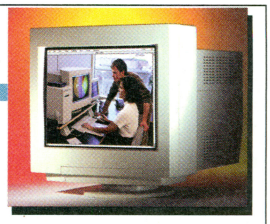
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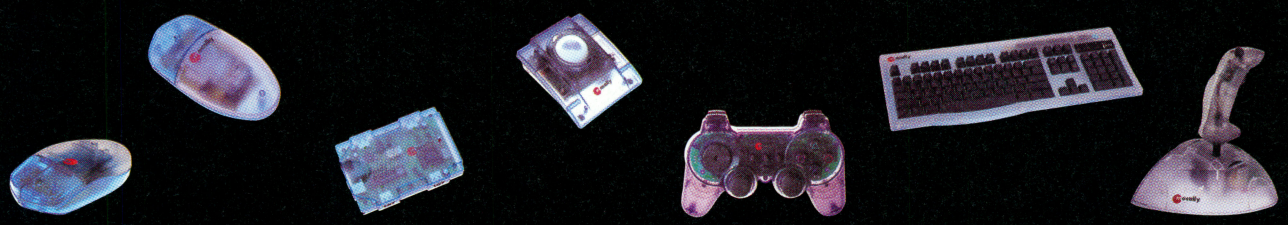
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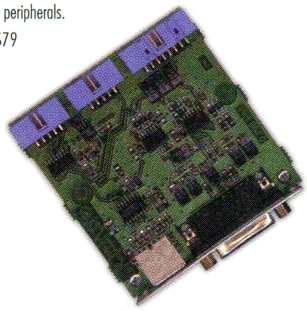
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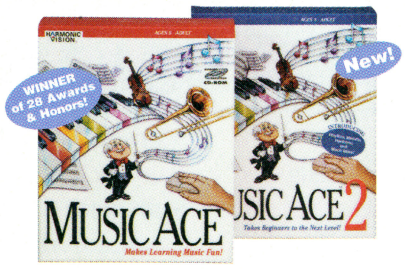
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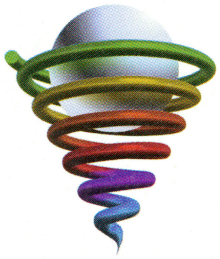
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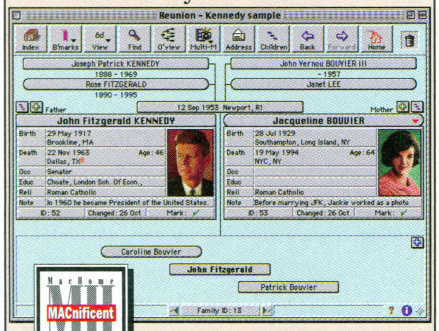
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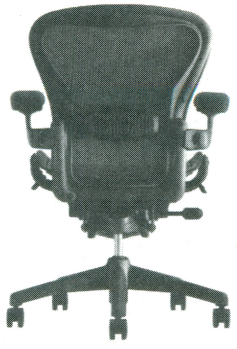
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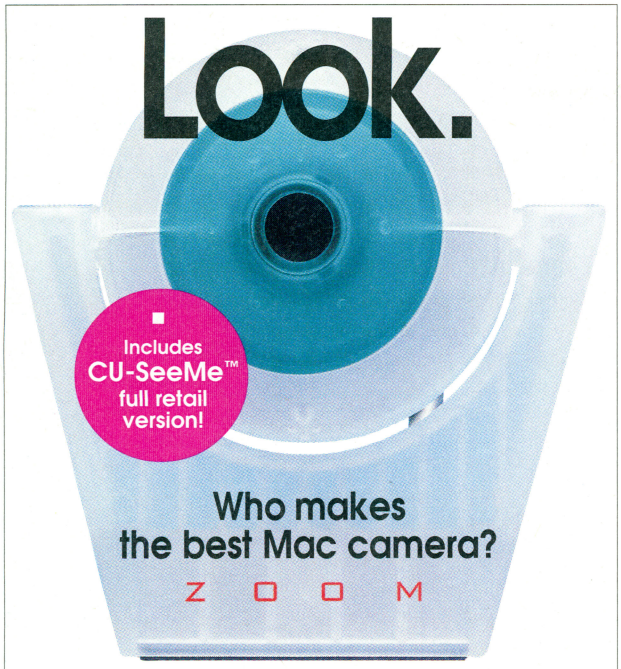
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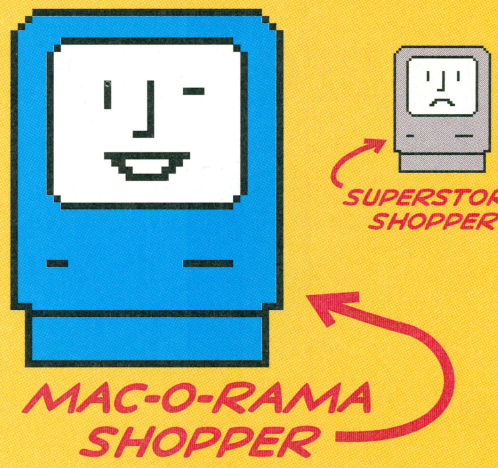
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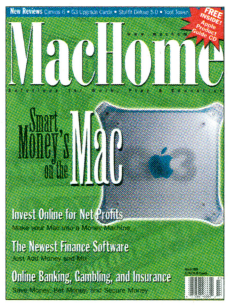
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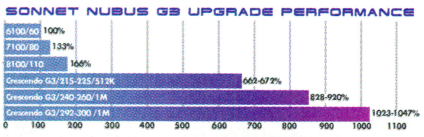
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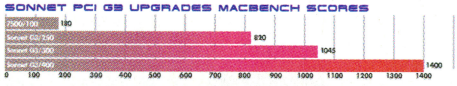
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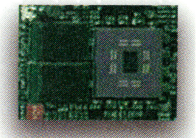
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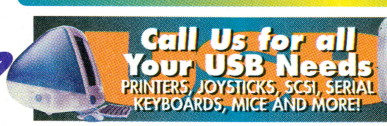


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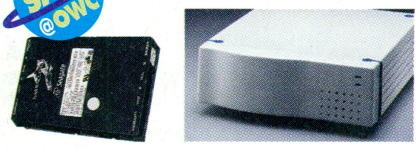
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ihnatko [Commentary]

By Andy Ihnatko

Technicolor Yawn

Why'd they drain the colors from my Mac logo?

I'm sorry, dear readers, but this G3 PowerMac I've just set up here in my office is creeping me out. And I've really, really been giving it a chance, honestly. But I keep staring at the CPU and thinking wrong … wrong … *wrong*!

It's not the basic shape and color so much. Some people don't like the fact that, from certain angles, it looks like a big Halls mentholated cough drop. Pishtosh, say I. Perhaps you haven't all spent three harsh winters on a lobster boat off the coast of Eggemoggin, Maine, as I have, but even if you had to pretend that you did (as I am now), you're still subconsciously going to associate that shape and color with warmth and soothing relief, which are two thoughts you so desperately need to cling to when you're in Hour Four of trying to figure out why Open Transport suddenly can't locate a DNS server.

It's exactly like those times when there'd be a commercial for Trix and the rabbit would be all panicky because some evil ne'er-do-well had "Stolen the Rainbow," leaving the cereal a uniform color.

No, my problem's with the Apple logo. It's just so … *blue*, you know?

It's a nice shade, honest; if it weren't unspeakably cruel and more than marginally illegal I'd paint my dog that color. But I grew up with a big, fat six-color Apple logo, and where has that familiar hallmark of warmth and reliability gone? The Apple logo has officially gone monochromatic. On the Website, in the literature, and on every single Apple product. It's exactly like those times when there'd be a commercial for Trix and the rabbit would be all panicky because some evil ne'er-do-well had "Stolen the Rainbow," leaving the cereal a uniform color. But even as kids, we knew that it was a marketing gimmick designed to kick-start sluggish mid-summer sales and that the four fruity colors would be back with the next shipment. What am I supposed to tell my darling nieces and nephews when they ask me why the Apple on their new iBook isn't nearly as spectacular as the ones on the computers in my office?

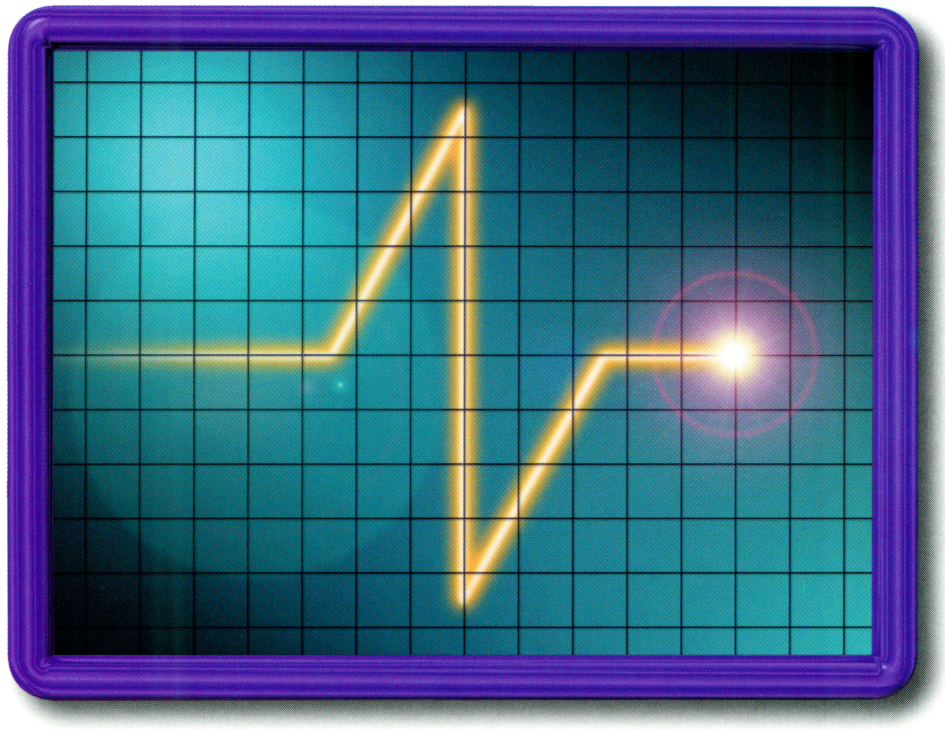
Apple's original logo resembles a turn-of-the-century fruit-crate label. Unless it were printed at least three inches high, you'd have no idea what the name of the company was or who that figure under the apple tree was supposed to be (Sir Isaac Newton, of course). Then Apple "went corporate" and replaced it with the classic six-color logo. Technically, they sold out, yet still managed to go with an official emblem that no one in their right mind would have approved. Six colors that had to be printed in excruciatingly tight registration to remain distinct from each other, which meant that there was no such thing as a trivial Apple print job. It's emblematic that today, in these days of renewed growth and profitability, Apple has waged a trademarkical retreat away from frivolity and into practicality. One color. Six colors is the logo of a company that lost millions on a rock festival … and then put on a bigger one the very next year. This logo is that of a company that hosted a party at Macworld Expo this July and made its guests pay for mixed drinks. A monkey could make a stack of "From The Desk Of …" memo pads with this logo.

And any change this sweeping and fundamental had to come from the desk of Chairman Steve himself. Still, he's proven to be pretty good at Sweeping and Fundamental. Is this master stroke more than merely a symbolic move? Well, log on to eBay and do a search on Apple Collectibles. Already the auctioneers are trying to feed the bidding frenzies by mentioning that their old pens and key rings and T-shirts feature the Classic and Now Scarce Six-Color Logo. Maybe this is part of Steve's backup plan: in case the ship date for MacOS X slips, he can shore up the bottom line by anonymously auctioning off all of the old towels and sunglasses and stationery they've got in storage.

Steve, you magnificent sunofabuck … MH

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